

MEMBER STATES				NON-MEMBER STATES
E AFGHANISTAN	E DENMARK	E LIBYAN ARAB JAMAHIRIYA	E SAINT VINCENT AND THE GRENADINES	E COOK ISLANDS
F ALBANIA	F DJIBOUTI	E LIECHTENSTEIN	E SAMOA	F HOLY SEE
F ALGERIA	E DOMINICA	E LITHUANIA	F SAN MARINO	E KIRIBATI
FS ANDORRA	SE DOMINICAN REPUBLIC	F LUXEMBOURG	F SAO TOME AND PRINCIPE	E MAURU
*F ANGOLA	SE ECUADOR	F MADAGASCAR	E SAUDI ARABIA	E NIUE
E ANTIGUA AND BARBUDA	*F EGYPT	E MALAWI	F SENEGAL	F SWITZERLAND
SF ARGENTINA	SE EL SALVADOR	E MALAYSIA	EF SEYCHELLES	E TONGA
E ARMENIA	SF EQUATORIAL GUINEA	E MALDIVES	E SIERRA LEONE	E TUVALU
E AUSTRALIA	E ERITREA	F MALI	E SINGAPORE	
E AUSTRIA	E ESTONIA	E MALTA	E SLOVAKIA	
E AZERBAIJAN	E ETHIOPIA	E MARSHALL ISLANDS	E SLOVENIA	
E BAHAMAS	E FIJI	F MAURITIA	E SOLOMON ISLANDS	
E BAN RAIN	E FINLAND	E MAURITIUS	E SOMALIA	
E BANGLADESH	F FRANCE	SE MEXICO	E SOUTH AFRICA	
E BARBADOS	F GABON	E MICRONESIA (FEDERATED STATES OF)	SE SPAIN	
E BELARUS	E GAMBIA	F MONACO	E SRI LANKA	
E BELGIUM	E GEORGIA	E MONGOLIA	E SUDAN	EF FAO
E BELIZE	E GERMANY	E MOROCCO	E SURINAME	E TAEA
F BENIN	E GHANA	E MOZAMBIQUE	E SWAZILAND	EF ICAO
E BHUTAN	E GREECE	E MYANMAR	E SWEDEN	EF IFAD
SE BOLIVIA	E GRENADA	E NETHERLANDS	E SYRIAN ARAB REP.	EF ILO
E BOSNIA AND HERZEGOVINA	SE GUATEMALA	E NEPAL	E TAJIKISTAN	E IMF
E BOTSWANA	F GUINEA	E NETHERLANDS	E THAILAND	E IMO
E BRAZIL	F GUINEA-BISSAU	E NEW ZEALAND	E THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	EF ITU
E BRUNEI DARUSSALAM	F GUYANA	SE NICARAGUA	E TOGO	EF UNESCO
*F BULGARIA	F HAITI	F NIGER	E TRINIDAD AND TOBAGO	EF UNIDO
F BURKINA FASO	SE HONDURAS	F NIGERIA	F TUNISIA	FE UPU
F BURUNDI	E HUNGARY	E NORWAY	E TURKEY	E WB
F CAMBODIA	E ICELAND	E OMAN	E TURKMENISTAN	EF WHO
F CAMEROON	E INDIA	E PAKISTAN	E UGANDA	EF WIPO
EF CANADA	E INDONESIA	E PALAU	E UKRAINE	EF WFP
F CAPE VERDE	E IRAN (ISLAMIC REP. OF)	SE PANAMA	E UNITED ARAB EMIRATES	EF WTO
F CENTRAL AFRICAN REPUBLIC	E IRAQ	E PAPUA NEW GUINEA	E UNITED KINGDOM	
F CHAD	E IRELAND	S*F PARAGUAY	E UNITED REP. OF TANZANIA	
SE CHILE	E ISRAEL	SE PERU	E UNITED STATES	
E CHINA	F ITALY	E PHILIPPINES	SE URUGUAY	
SE COLOMBIA	E JAPAN	E POLAND	E UZBEKISTAN	
F COMOROS	E JORDAN	E PORTUGAL	EF VANUATU	
F CONGO	E KAZAKHSTAN	E QATAR	SE VENEZUELA	
SE COSTA RICA	E KENYA	E REPUBLIC OF KOREA	E VIET NAM	
F COTE D'IVOIRE	E KUWAIT	E REPUBLIC OF MOLDOVA	E YEMEN	
E CROATIA	E KYRGYZSTAN	F ROMANIA	E YUGOSLAVIA	
SE CUBA	F LAO PEOPLE'S DEM. REP.	E RUSSIAN FEDERATION	F ZAIRE	
E CYPRUS	F LATVIA	E RHANDA	E ZAMBIA	
E CZECH REPUBLIC	F LEBANON	E SAINT KITTS AND NEVIS	E ZIMBABWE	
E DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	F LESOTHO	E SAINT LUCIA		
	E LIBERIA			

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30 May 1997

ARGENTINA

(23 April 1997)

La Misión Permanente de la República Argentina ante las Naciones Unidas presenta sus atentos saludos a la Secretaría de las Naciones Unidas - Centro de Asuntos de Desarme - y en relación a la aplicación de las Recomendaciones de la Tercera Conferencia de Exámen de la Convención sobre la prohibición de las armas bacteriológicas (biológicas) y tóxicas, incluido el intercambio de información y de datos convenidos en la Declaración Final de la Tercera Conferencia de Exámen, tiene el agrado de remitirle la siguiente información proporcionada por el Gobierno argentino:

"Convención de Armas Biológicas. Informe de actividades nacionales año 1996.

Medida de Fomento de la Confianza "A"

De acuerdo a las tareas de recolección realizadas en el país, de información que permita aumentar la transparencia de las actividades que se llevan a cabo en el país, no existen programas de investigación y desarrollo a nivel estatal/privado, ni actividades que puedan estar vinculadas con la Convención.

Medidas de Fomento de la Confianza "B"

No se registraron novedades.

Medidas de Fomento de la Confianza "C"

Se mantiene la política de intercambio de informaciones en todas las áreas de la investigación biológica.

Medidas de Fomento de la Confianza "D"

No existe información que se haya obtenido a partir del contacto científico en el campo de la investigación biológica básica con propósitos pacíficos, en lo referido a actividades prohibidas por la Convención.

Argentina participó de las reuniones del "Grupo Ad-Hoc de los Estados Partes de la Convención sobre la Prohibición del Desarrollo, la producción y el almacenamiento de Armas Bacteriológicas (Biológicas) y Tóxicas y sobre su destrucción", pero no envió científicos.

Asimismo Argentina participó, con la presencia de un científico, en la "IV Conferencia de Revisión de la Convención sobre la prohibición del desarrollo, la producción y el almacenamiento de Armas Bacteriológicas (Biológicas) y Tóxicas y sobre su destrucción", la que tuvo lugar en la ciudad de Ginebra (Suiza) del 25 de noviembre al 5 de diciembre de 1996.

Medidas de Fomento de la Confianza "E"

Se continúa trabajando activamente a nivel nacional en las tareas que demanda el cumplimiento de las obligaciones que emanan del Decreto N° 603/92 (sobre materiales sensitivos).

Medidas de Fomento de la Confianza "F"

Sin novedad.

Medidas de Fomento de la Confianza "G"

Sin novedad."

La Misión Permanente de la República Argentina ante las Naciones Unidas reitera a la Secretaría de las Naciones Unidas las seguridades de su más distinguida consideración.

ARMENIA

(28 April 1997)

The Chargé d'Affaires a.i. of the Republic of Armenia to the United Nations presents his compliments to the Secretary-General of the United Nations and in accordance with the Final Document of the Third Review Conference of the parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their destruction has the honor to inform the Secretary-General that the Republic of Armenia has nothing to declare.

AUSTRALIA

(16 April 1997)

**REPORT BY AUSTRALIA IN ACCORDANCE WITH THE FINAL DECLARATION
OF THE THIRD REVIEW CONFERENCE OF THE PARTIES TO THE
CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION
AND STOCKPILING OF BACTERIOLOGICAL (BIOLOGICAL) AND TOXIN
WEAPONS AND ON THEIR DESTRUCTION.**

The Final Declaration of the Third Review Conference of the parties to the Convention contained a number of measures designed to strengthen the authority of the Convention and to enhance confidence in the implementation of its provisions. These included the introduction of new Confidence Building Measures.

Australia reports the following information in accordance with the Final Declaration, with the Annex to the final Declaration on Confidence Building Measures, and with the recommendations of the Ad Hoc Meeting of Scientific and Technical experts from States Parties to the Convention.

1. Declaration Form on Nothing to Declare or Nothing New to Declare

Measure	Nothing to Declare	Nothing New to Declare
A, part 1	☐	☐
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☐
A, part 2 (iii)	☐	☐
B (i)	☐	☐
B (ii)	☐	☐
C	☐	☒
D	☐	☐
E	☐	☐
F	☐	☒
G	☐	☐

(Please mark the appropriate box(es) for each measure with a tick)

Date : 15 April 1997

State Party to the Convention: **Australia**

2. Confidence Building Measure "A"

Part 1: Exchange of Data on Research Centres and Laboratories

Australia has three maximum containment units which meet the criteria for a "maximum containment laboratory" as specified in the 1983 WHO Laboratory Biosafety Manual. They are :

- The Australian Animal Health Laboratory
- CSL Limited
- The National High Security Quarantine Unit

Data on these facilities is provided below in accordance with the Annex to the Final Declaration on Confidence Building Measures.

The National High Security Quarantine Unit, currently sited at Fairfield Hospital, in Melbourne, under the auspices of the Victorian Infectious Diseases Reference Laboratory (VIDRL), will be relocated when the VIDRL moves to a new site in late 1997 or early 1998.

Also, some Australian hospitals and university departments have containment units where diagnostic and research work is conducted.

Australia has commenced a modest program of research into defence against toxins. This research, which includes permitted biological activities directly related to the Convention, is conducted by the NBC Defence and Disarmament Section of the Aeronautical and Maritime Research Laboratory, which is part of Australia's Defence Science and Technology Organisation. This program does not include work with reproducing organisms pathogenic to humans. A description of the projected work is given below in Part 2.

The Department of Defence has renamed its malaria research unit, the Army Malaria Institute which was relocated from Sydney to new premises in Enoggera (Brisbane, Qld) late in 1996. Its primary function is the protection of soldiers against natural occurrences of malaria. The Unit's objectives are:

- the development of effective drug regimens for the prophylaxis and treatment of malaria in military personnel, including research on possible new drugs
- characterisation of the drug resistance pattern of malaria parasites, particularly in the South West Pacific
- research on insect repellents and other preventive measures, and
- research on malaria vector identification and distribution in the South West Pacific.

The Institute maintains a malaria parasite culture laboratory and a mosquito breeding capability. Some of this work is conducted on a collaborative basis with regional neighbours.

[Form A, Part 1]

Exchange of Data on Research Centres and Laboratories¹**1. Name(s) of facility²**

Australian Animal Health Laboratory

2. Responsible public or private organisation/companyCommonwealth Scientific and Industrial Research Organisation (government), and
Department of Primary Industries and Energy (government).**3. Location and postal address**Ryrie Street
GEELONG VICTORIA
PO Bag 24
GEELONG VIC 3220
AUSTRALIA**4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

No Department of Defence funding. Joint funding by the Commonwealth Scientific and Industrial Research Organisation (government) and the Department of Primary Industries and Energy (government). Minor funding by private rural industry organisations.

5. Number of maximum containment units³ within the research centre and/or laboratory, with an indication of their respective size (m²)One maximum containment system and enclosure. Total floor space 11,000 m², comprised of three main parts

- a large-animal accommodation area, total floor area about 3,500 m², made up of 29 rooms - each of these with a floor area of about 6 m² - and with a service area, incinerator, and autopsy area.

¹ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

² For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

³ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

[Form A, Part 1]

- a lab complex of total floor area about 3,500 m², made up of three functional laboratory suites - each of these with a floor area of about 1,100 m² - and each comprised of six laboratories and four attached small-animal rooms. The laboratory suites are for diagnosis, pathology and virology. There are attached service areas.
- a common support area for glass washing, tissue culture, laundry and other services.

6. If no maximum containment unit, indicate highest level of protection N/A

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

The high security laboratory works on research and diagnosis of animal diseases caused by organisms which largely are exotic to Australia, of which some may present a risk to laboratory workers. Organisms under investigation are pseudo-rabies (Aujeszky's Disease), bluetongue virus (attenuated vaccine strains), avian influenza virus (fowl plague), Newcastle disease virus (low to high virulence strains), rabies virus, hog cholera virus, *Mycoplasma mycoides* (bovine pleuropneumonia), *Brucella melitensis* and a range of other brucella strains, swine vesicular disease, vesicular exanthema virus, vesicular stomatitis virus (a range of isolates), transmissible gastroenteritis virus, African swine fever, rabbit haemorrhagic disease virus, porcine respiratory and reproductive syndrome virus, Japanese encephalitis virus, equine morbillivirus, Australian bat lyssavirus, a wide range of fish pathogens (both bacterial and viral), and the scrapie agent. All agents are of Risk Groups 2 and 3 (under WHO classification scheme) except equine morbillivirus, which has been classified as a biological Risk Group 4 agent (by Standards Australia, AS/NZS 2243.3:1995).

[Form A, Part 1]

Exchange of Data on Research Centres and Laboratories⁴**1. Name(s) of facility⁵**

CSL Limited

2. Responsible public or private organisation/company:

CSL Limited

3. Location and postal address:

45 Poplar Road
PARKVILLE VIC 3025
AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. Financed through trading operations.

5. Number of maximum containment units⁶ within the research centre and/or laboratory, with an indication of their respective size (m²)

CSL has two high containment facilities. The first consists of two laboratories, one of 70m² and the other of 50m². The second facility is a single laboratory of approximately 60m².

6. If no maximum containment unit, indicate highest level of protection n/a

- ⁴ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
- ⁵ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)"
- ⁶ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

[Form A, Part 1]

7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate

The work of CSL is directed chiefly to the production of human plasma fractions and the production of vaccines for the prevention of disease in humans and in domestic animals. Some bacterial toxins are produced in order to make toxoids for prophylactic purposes. The diseases involved are cholera, brucellosis, tuberculosis, influenza, plague and typhus. Toxins are produced from a number of organisms such as tetanus, botulinum, perfringens and chauviae.

The high containment laboratories are used for experiments to determine the efficacy of such vaccines and to produce Q-Fever vaccine.

[Form A, Part I]

Exchange of Data on Research Centres and Laboratories⁷**1. Name(s) of facility⁸ :**

National High Security Quarantine Unit

2. Responsible public or private organisation/company:

Department of Human Services and Health (government)

3. Location and postal address:

Fairfield Hospital
Yarra Bend Road
FAIRFIELD VIC 3078
AUSTRALIA

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

No Department of Defence funding. Department of Human Services and Health (government).

5. Number of maximum containment units⁹ within the research centre and/or laboratory, with an indication of their respective size (m²)

One high security laboratory, containing 3 portable isolation units. Total area 300m².

⁷ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

⁸ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

⁹ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

[Form A, Part 1]

- 6. If no maximum containment unit, indicate highest level of protection N/A**
- 7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate**

The Unit consists of a laboratory and patient care unit for the diagnosis and treatment of possible imported cases of viral haemorrhagic fever (or other quarantinable diseases). Such diseases would include Lassa fever, Ebola fever, Crimean-Congo fever and Marburg fever.

The Unit is also used for Rickettsial culture (both for diagnostic purposes and the production of diagnostic purposes and the production of diagnostic reagents), and in-vivo and in-vitro culture for other bacterial, fungal or viral category four human pathogens from clinical specimens, plus subsequent identification, antimicrobial susceptibility testing and further typing studies as may be necessary. Such pathogens include: *Bacillus anthracis*, *Brucella* spp, *Francisella* spp, *Coccidioides*, *Blastomyces*, *Histoplasma*, *Paracoccidioides* and exotic viruses causing haemorrhagic fevers or encephalitis.

Potentially dangerous pathogens are occasionally imported (under AQIS approval) to allow diagnostic tests to be established, in accordance with the Quarantine Act 1908 as stated in Confidence building "E".

The clinical management of cases of quarantinable viral haemorrhagic fevers (VHFs) is provided in specially designated hospital units in each State and Territory. The Unit is capable of providing a back-up facility for the clinical management of exceptional cases of quarantinable VHFs. The Unit provides the laboratory support for the management of all cases of quarantinable VHFs.

At present, the Unit is sited at Fairfield Hospital, in Melbourne under the auspices of the Victorian Infectious Diseases Reference Laboratory (VIDRL). It will be relocated when the VIDRL moves to a new site in late 1997 or early 1998.

[Form A, Part 2(i)]

Part 2 : Exchange of Information on National Biological Defence Research and Development Programs

1. Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere?

Yes.

Australia has instituted a modest research and development program in biological defence, which is detailed below.

[Form A, part 2 (ii)]

National Biological Defence Research and Development Program**Description**

1. The objective of the program is to provide the Australian Government with a basic understanding of the issues relating to recent developments in the biological sciences and biotechnology that might be employed by an aggressor in war. This understanding will support the ability of the Australian Defence Force to operate in support of the United Nations in parts of the world where biological weapons may be used. It will also enhance Australian ability to contribute to consideration of arms control verification measures in this field. The principal research and development activities are concerned with characterising toxins that are threats in terms of both the Biological and Chemical Weapons Conventions. It will also become concerned with the epidemiology of disease, computer simulations of disease spread, and the detection of biological agents. It will include studies on toxins, on the detection of toxins and non-living components of organisms, and on non-pathogenic organisms. The Australian program is concerned with diagnostic techniques, detection, treatment, toxicology, physical protection (in conjunction with chemical protection) and decontamination.

2. The program is funded solely by the Australian Department of Defence, with an allocation for the current financial year (July 1996-June 1997) of A\$365,000.

[Form A, part 2 (ii)]

3. Design and preparation of inhibitors of the action of the toxin ricin has been contracted out to the Victorian College of Pharmacy (Monash University).

4. 10%

5. The Victorian College of Pharmacy has been tasked with the design and preparation of inhibitors of the action of the toxin ricin.

6. The organisational structure is as follows. There is a single active research cell operating within the Department of Defence within the hierarchy represented below.

Defence Department
|
Defence Science and Technology Organisation
|
Aeronautical and Maritime Research Laboratory
|
Ship Structures and Materials Division
|
NBC Defence and Disarmament Section
|
Biological Defence Research

7. A declaration in accord with Form A, part 2 (iii) follows.

[Form A, part 2 (iii)]

Facilities

There is one facility.

1. **Name** NBC Defence and Disarmament Section
2. **Location**

 Address Aeronautical and Maritime Research Laboratory
 PO Box 4331
 Melbourne, 3001 Australia

 Physical Location Cordite Avenue
 Maribyrnong
 Victoria, Australia
3. **Floor Area** 115 square metres
4. **Personnel**
 - (i) Total number 8 (3 others partly associated with the research)
 - (ii) All are civilian
 - (iii) 6 scientists
 2 technicians
 Nil engineers
 Shared administrative and support staff
 - (iv) Biochemistry, molecular biology, microbiology, immunology
 - (v) One contract has been let to the Victorian College of Pharmacy (Monash University)
 - (vi) Wholly financed by the Department of Defence
 - (vii) Research funded at A\$365,000 per annum.
 No development or test funding.
 - (viii) Publication in scientific journals is encouraged, and staff are expected to maintain their professional status by such publication.
 - (ix) The program has just begun and initial research reports are being prepared for publication.

[Form A, part 2 (iii)]

5. Description of Biological Defence Work

The initial focus of the work is the plant toxin, ricin. Ricin was a potential threat against Australian Defence Force personnel operating as part of the multinational coalition assisting Kuwait in 1991, and is also listed in Schedule 1 of the Chemical Weapons Convention. The current program is focused on detection of ricin using immunochemical techniques, and the design of specific ricin inhibitors under contract with the Victorian College of Pharmacy. Studies on detection of biological material will also include mass spectrometry and other physico-chemical methods, to determine their utility for field detection of biological agents and BWC verification procedures.

No microorganisms are being investigated at present.

There are no outdoor studies on biological aerosols.

3. CONFIDENCE BUILDING MEASURE "B"

Exchange of Information on Outbreaks of Infectious Diseases and Similar Occurrences caused by Toxins

Australia has had no outbreaks of infectious diseases and similar occurrences caused by toxins, that deviate from the normal pattern. For that reason there is a Form B (i), but no Form B (ii), attached under this confidence-building measure.

Human diseases

The Australian Department of Health and Family Services has overall responsibility for national disease surveillance. The National Centre for Disease Control of the Department routinely receives diagnostic data from key medical laboratories throughout Australia. This data is published fortnightly in *Communicable Diseases Intelligence*, and include 'notifiable diseases' statistics. *Communicable Diseases Intelligence* is sent to the World Health Organisation, and is distributed to approximately 3,400 primary and 40,000 secondary users in the health professions and relevant research fields nationally and internationally.

Each Australian State and Territory has legislation which requires doctors, hospitals and/or laboratories to report the occurrence of certain diseases, known as "notifiable diseases". A Health Policy Directive was issued in 1995 requiring all Australian Defence Force medical officers to report notifiable diseases to Defence Headquarters as well as to State/Territory health authorities. Under the auspices of the Communicable Diseases Network of Australia New Zealand (the Network), the State and Territory health authorities provide data on an agreed set of notifiable diseases to the Australian Department of Health and Family Services. The data is collated by the Department and published each fortnight in the *Communicable Diseases Intelligence*.

The Network meets fortnightly by teleconference. It provides a forum for information exchange on communicable disease activity in Australia and New Zealand and enables Federal and State health authorities to cooperate in taking prompt action to control outbreaks.

The Network is currently implementing a National Communicable Disease Surveillance Strategy. This Strategy will assist governments and public health officials to strengthen the coordination and planning of surveillance activities and to develop plans and priorities for responding to new or emerging infections. As part of the Strategy, the current list of notifiable diseases will be reviewed together with the guidelines used to determine which diseases should be made notifiable to Australian Governments.

Animal diseases

Within Australia's federal constitutional structure of government, State Governments have responsibility for animal health. The attached animal diseases return relates to outbreaks of animal diseases as reflected in Australian reporting to the Office International des Epizooties (OIE) and the Food and Agriculture Organisations (FAO).

Plant diseases

Within Australia's federal constitutional structure of government, State Governments have responsibility for plant health. There is no formal nation-wide mechanism for reporting occurrences of plant pests and diseases. Such information is maintained by State Government agencies, but is not coordinated or comprehensive.

Still, the Australian Quarantine and Inspection Service (AQIS) - a Federal service - keeps some disease and pest-related information on specific crops which is provided by the States. Accordingly, the incidences of plant diseases reported below reflect detections of diseases for the period 1995 to 1996 provided to AQIS by the States for referral to the Australian Agricultural Council/Standing Committee on Agriculture, a body which determines quarantine implications, and eradication action, at the national level.

Background Information on Outbreaks of Reportable Infectious Diseases

In accordance with the new requirements agreed at the Third Review Conference, a summary table of notifiable diseases for Australia for the years 1991 to 1996 is attached as Form B (i).

[Form B (i)]

Background Information on Outbreaks of Reportable Infectious Diseases

(A) Human diseases

Nationally Notifiable Communicable Diseases in Humans 1991 - 1996

Diseases	Number of cases per year					
	1991	1992	1993	1994	1995	1996
AIDS	796	772	787	787	648	NA
HIV	1417	1205	1050	984	827	NA
Anthrax	NN	NN	NN	NN	NN	NN
Ross River virus infection	3532	5630	5428	3960	2536	7782
Barmah Forest virus infection	0	0	0	0	488	789
Dengue	46	366	690	17	32	43
Australian encephalitis	0	0	0	0	0	2
Arbovirus (NEC)	199	303	578	607	488	99
Botulism	NN	0	0	0	0	0
Brucellosis	29	28	18	37	31	38
Campylobacter infection	8672	9135	8027	10252	11140	11883
Chancroid	0	5	1	0	2	1
Chlamydial infection	3086	6073	6342	6357	6236	7319
Cholera	0	3	6	3	5	4
Diphtheria	8	14	1	0	0	0
Donovanosis	72	78	63	114	85	46
Gonococcal infection	2350	2908	2741	2911	3174	3823
Gonorrhoea(a)	2321	2350	2908	2741	2911	3174
<i>Haemophilus influenzae</i> type b	549	501	399	176	77	52
Hepatitis A	2195	2109	1976	1873	1602	2150
Hepatitis B (incident)*	-	-	-	328	346	194
Hepatitis B (unspecified)	3652	5219	2305	642	1534	6136
Hepatitis C (incident)*	-	-	-	42	90	40
Hepatitis C (unspecified)	4116	8812	7555	8898	9564	9060
Hepatitis (NEC)	338	70	68	49	28	18
Hydatid disease**	44	38	32	56	47	46

NA - not available

NN - not notifiable

NEC - not elsewhere classified

* Prior to 1994 the incident and other cases are not distinguished

** Not notifiable in all States and Territories

[Form B (i)]

Nationally Notifiable Communicable Diseases in Humans 1991 - 1996 (cont)

Diseases	Number of cases per year					
	1991	1992	1993	1994	1995	1996
Legionellosis	110	185	167	214	177	185
Leprosy	13	16	14	11	7	9
Leptospirosis	169	159	175	131	147	226
Lymphogranuloma venereum	0	3	1	2	1	0
Malaria	790	712	688	704	623	848
Measles	1380	1425	4461	4915	1340	499
Meningococcal infections	285	292	378	382	391	426
Ornithosis**	136	94	95	90	182	79
Pertussis (whooping cough)	337	739	3956	5689	4336	4335
Plague	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0
Q fever	595	543	860	661	482	540
Rabies	0	0	0	0	0	0
Rubella	620	3810	3812	3312	4379	2755
Salmonellosis	5440	4614	4645	5507	6050	5767
Shigellosis	902	694	699	734	743	661
Syphilis	2053	2695	2226	2266	1848	1460
Tetanus	7	14	8	15	5	2
Tuberculosis	590	970	985	1105	1194	1097
Typhoid	82	50	39	42	56	82
Viral haemorrhagic fever	0	0	0	0	0	0
Yellow fever	0	0	0	0	0	0
Yersiniosis	515	567	459	418	314	268

NA - not available

NN - not notifiable

NEC - not elsewhere classified

** Not notifiable in all States and Territories

In 1996, the first case of human infection with a novel lyssavirus was reported. The patient died after developing encephalitis and was shown to have been infected with the lyssavirus, which had recently been discovered in several species of bat native to Australia. Although the source of infection was not identified, it is most likely that the patient, who handled bats regularly, was bitten or scratched by an infected animal. Further information is provided in the return on animal diseases. It should be noted that, although data is limited at this stage, available evidence is that this virus has probably been present in Australia for many years.

Animal diseases

[Form B (i)]

I. General comments on changes in the animal health activities of the veterinary services

During 1996, there was a review on imported fish and fish products and a major quarantine review ("Nairn Review"), while the Australian Animal Health Council Limited commissioned three small expert Task Groups to assist it to develop broad strategic national policy advice and recommend national programs to achieve a more efficient animal health service system, an expanded national animal disease emergency system and to define endemic disease management priorities.

There was also a major review of Australia's incursion management capability undertaken during 1996, commissioned by the Council of Agricultural Ministers. The review was broad ranging, incorporating the animal, plant and aquatic animal sectors and brought together key scientists, industry representatives and Governments to develop a comprehensive, national approach to emergency outbreak management policy. The recommendations from the final report have been accepted and a national framework for implementation has been agreed.

The Table shows the extent of occurrence of reportable animal diseases present in Australia during 1996. Comments on selected diseases, according to OIE/FAO listings, are included below. List A diseases are infectious diseases which have the potential for very serious and rapid spread, irrespective of national borders; which are of serious socio-economic or public health consequences; and are of major importance in international trade. List B diseases are infectious diseases which are considered to be of socio-economic and/or public health significance within countries and are significant in international trade.

II. Comments on selected List A diseases

There were no outbreaks of any List A diseases in Australia in 1996.

Bluetongue Virus

While bluetongue virus occurs in Australia, there is no evidence of clinical disease in the field. Programs are in place to monitor virus activity. In the 1995/96 arbovirus season, transmission of bluetongue virus was mostly confined to the far north of Australia, in areas north of the 18th parallel, with limited transmission on the central part of the eastern seaboard. Virus activity was detected in sentinel herds in the far north of the Northern Territory and Western Australia, northern Queensland and at sites on the coast of south east Queensland and the far north coast of New South Wales. Infections were due to serotypes 1, 16, 20 and 21 with serotypes 16 and 21 being limited to the north of Northern Territory and Western Australia.

Throughout most of the bluetongue endemic area of the northern half of Australia, *Culicoides* numbers were lower than normal. *C. brevitarsis* was trapped throughout the endemic area, but *C. wadai* was found only in the far north, with its distribution more restricted than in recent years.

[Form B (i)]

III. Comments on selected List B diseases

Bovine tuberculosis

Australia was declared impending free from bovine tuberculosis on 31 December 1992. Tuberculosis breakdowns will still occasionally occur and monitoring based on the inspection of carcasses at abattoirs is continuing. A National Granuloma Submission Program has been in place since March 1992 at all export and domestic abattoirs. All granulomas from the thorax and those suggestive of tuberculosis from other parts of the body are submitted for laboratory analysis. In 1995 there were seven breakdowns reported - one each in South Australia, Western Australia, Queensland and Victoria; and three in the Northern Territory. Two of the outbreaks involved buffalo, the rest cattle. All breakdowns are subject to compulsory control measures involving testing and partial or total destocking of the herd.

Johne's disease

In Australia, Johne's disease (JD) is seen primarily in dairy cattle. It occurs occasionally in beef cattle, sheep and dairy goats, and alpacas. It occurs primarily in the eastern States, it is not present in Queensland, Northern Territory or Western Australia. The disease is notifiable and subject to compulsory government controls, including quarantine and movement restrictions. In May 1996, Australia embarked on a National Johne's Disease Market Assurance Program for the cattle industries. This is a core component of a broader Australian disease program to help control the spread and reduce the impact of Johne's disease on Australian livestock industries. The program was developed by representatives from the cattle industries, government and the veterinary profession. It provides an opportunity for Australian cattle producers to adopt measures that will greatly help to reduce the spread of Johne's disease.

Late in 1996 the Victorian Government announced that it would financially support an eradication program for ovine Johne's disease in that State. Ovine Johne's disease has been recognised recently as a separate entity and is seen as an emerging threat to the sheep industry.

Japanese Encephalitis

Following the cases of Japanese Encephalitis (JE) in the Torres Strait last year, sentinel monitoring of pigs and cattle was undertaken in the Northern Peninsular area of Cape York (Queensland) and of pigs on four islands in the Torres Strait (Hammond, Erub, Babu, and Saibai). Samples were screened for flavivirus activity by either haemagglutination inhibition or ELISA techniques and positive samples subjected to testing by serum neutralisation. In March 1996 seroconversion to JE was detected in twelve of thirteen sentinel pigs on Saibai Island. Monitoring at other sites continued with negative results indicating that seroconversion of sentinel animals to JE was confined to Saibai Island.

[Form B (1)]

Viral Haemorrhagic disease of rabbits

In 1996 viral haemorrhagic diseases (rabbit calicivirus - RCV) continued to spread. Studies during the year reaffirmed the specificity of the virus to rabbits and allayed concerns regarding the potential for RCV to affect humans. The Australian Government approved RCV as a biological control agent for wild rabbits, a major agricultural and environmental pest in Australia. The first official release took place in early October.

Porcine reproductive and respiratory syndrome (PRRS)

A seriological survey, funded by the Australian Pig Research and Development Corporation, was undertaken in the first quarter of 1996 to look for evidence of exposure to PRRS virus in Australian pig herds. The survey was designed to provide 99% confidence of detecting at least one infected pig herd in Australia, assuming that at least 5% of herds would have been exposed to PRRS virus and that at least 25% of the "finisher" pigs in these herds would have antibodies to the virus. A two stage testing regime was used. In all, 875 samples from 163 herds from all States in Australia were tested. The results of the survey support the view that the Australian pig industry is free from PRRS virus.

Anthrax

Although not occurring in the 1996 reporting period, some early details are provided of a major outbreak of anthrax in dairy cattle in the Goulburn Valley in central northern Victoria early in 1997. The outbreak is now under control.

As at 13 March 1997, 82 properties had been affected, with 198 cattle deaths and 3 sheep deaths. There had also been one human case, a knackery worker infected with the cutaneous form who recovered uneventfully, following antibiotic therapy. Animals on a total of 198 properties had been vaccinated - 78,649 cattle and 2,663 sheep. Anthrax is quite rare in Victoria, with the last case in that State being diagnosed in 1988. An outbreak of this size is quite unusual in Australia and detailed epidemiological investigations are under way. All outbreaks occurred in intensively irrigated pastures. The irrigation paddocks concerned had been recently regraded and the irrigation channels cleaned and reconstructed. High humidity, aggravated by increased irrigation efficiency, exceptionally high temperatures and soil disturbance are all thought to have contributed to this unusual outbreak. Further details on this outbreak will be included in the 1998 return.

[Form B (i)]

IV. Comments on other diseases

Equine Morbillivirus (bat paramyxovirus)

During 1996 a new paramyxovirus was isolated from several fruit bats. The similarity of this new virus to the virus associated with the fatal "Acute Equine Respiratory Syndrome" or equine morbillivirus (EMV) pneumonia, suggests that the fruit bat is the natural host of EMV. EMV was first recognised in September 1994 - 14 racehorses associated with one racing stable at Hendra, Brisbane, died after showing acute respiratory illness. Two persons at the stables also contracted the disease, and one of these subsequently died. In October 1995, a third case of human infection with EMV was diagnosed. This case was also fatal. It is apparent that with both horses and humans, very close contact with infected body fluids is required for transmission to occur.

Since 1994, there has been extensive seriological testing of animals, including a range of wildlife species for evidence of EMV. All tests, with the exception of fruit bats, failed to show any evidence of EMV infection. About 15% of fruit bats tested, from all four species present in Australia, carried antibodies to EMV. In September 1996 a paramyxovirus was isolated from the uterine fluids of a sick female grey-headed fruit bat (*Pteropus poliocephalus*) found in the Brisbane area. This virus reacted strongly with human and horse serum samples containing antibodies to EMV. The virus and EMV produce similar changes in cell cultures. Preliminary studies have shown that the genetic sequence of the newly isolated virus is similar to the EMV isolates. These results suggest that fruit bats may be the natural host of the virus, with horses and human accidental hosts.

Australian bat lyssavirus

In 1996 a new Lyssavirus was identified in four species of bats in Australia (three species of fruit eating bat and one species of insectivorous bat). The first isolation was made in a black flying fox (*Pteropus alecto*) at Ballina, New South Wales in May 1996. Subsequent investigations and testing of stored samples suggest that the virus is widespread along the east coast of Australia and has been present since at least January 1995. In November a woman wildlife carer in Queensland developed encephalitis and died after being bitten and scratched by a bat.

Studies have shown that this lyssavirus is related to, but not distinct from, classical rabies virus. It varies from serogroup 1 by approximately 8% and from serogroup 5 and is therefore considered a new genotype. The virus has caused central nervous system signs in naturally acquired infections in bats and a human, and experimentally in mice. The close genomic and antigenic similarities of the new lyssavirus with rabies virus, and experimental studies in mice indicate that humans and animals will be protected by the use of current rabies vaccines and immunoglobulin.

[Form B (i)]

(B) Occurrence of Animal Diseases in Australia, by species - 1996

Disease	Species*	Occurrence in Australia 1996
Bluetongue	bov	serological evidence only; confined to certain regions
Anthrax	bov	exceptional occurrence; confined to certain regions
Anthrax	ovi	exceptional occurrence; confined to certain regions
Anthrax	cap	last occurrence in 1998
Anthrax	equ	exceptional occurrence; confined to certain regions
Echinococcosis/Hydatisosis	bov	low sporadic occurrence
Echinococcosis/Hydatisosis	ovi	low sporadic occurrence
Echinococcosis/Hydatisosis	cap	exceptional occurrence
Echinococcosis/Hydatisosis	sui	exceptional occurrence
Leptospirosis	bov	enzootic
Leptospirosis	sui	enzootic
Q fever	bov	serological evidence only
Q fever	ovi/	serological evidence only
	cap	
Paratuberculosis	bov	enzootic, confined to certain regions
Paratuberculosis	cap	low sporadic occurrence; confined to certain regions
Paratuberculosis	ovi	low sporadic occurrence; confined to certain regions
Anaplasmosis	bov	enzootic, confined to certain regions
Babesiosis	bov	enzootic, confined to certain regions
Bovine genital campylobacteriosis	bov	low sporadic occurrence
Bovine tuberculosis	bov	exceptional occurrence
Bovine tuberculosis	buf	exceptional occurrence
Cysticercosis (C. bovis)	bov	low sporadic occurrence
Dermatophilosis	bov	low sporadic occurrence
Dermatophilosis	ovi	low sporadic occurrence
Enzootic bovine leucosis	bov	enzootic, confined to certain regions
Infectious bovine rhinotracheitis	bov	low sporadic occurrence
Trichomoniasis	bov	low sporadic occurrence; confined to certain regions
Bovine malignant catarrh	bov	exceptional occurrence
Brucella ovis infection	ovi	low sporadic occurrence
Caprine arthritis encephalitis	cap	enzootic
Equine infectious anemia	equ	low sporadic occurrence, confined to certain regions
Equine rhinopneumonitis	equ	low sporadic occurrence
Infectious arteritis of horses	equ	serological evidence only
Japanese encephalitis	equ	serological evidence only
Atrophic rhinitis	sui	low sporadic occurrence
Porcine brucellosis (B. suis)	sui	low sporadic occurrence, confined to certain regions
Avian infectious	avi	low sporadic occurrence

[Form B (i)]

laryngotracheitis		
Avian tuberculosis	avi	low sporadic occurrence
Fowl cholera	avi	low sporadic occurrence
Fowl pox	avi	enzootic
Infectious bursal disease	avi	enzootic
Marek's disease	avi	enzootic
Mycoplasmosis (<i>M. gallisepticum</i>)	avi	enzootic
Psittacosis and Ornithosis	avi	low sporadic occurrence
Pullorum disease (<i>S. pullorum</i>)	avi	low sporadic occurrence; confined to certain regions
Myxomatosis	lep	enzootic
Viral haemorrhagic disease of rabbits	lep	enzootic
Epizootic Haematopoietic Necrosis	pis	low sporadic occurrence; confined to certain regions
Bonamiosis	pis	exceptional occurrence, confined to certain regions
Perkinsosis	pis	low sporadic occurrence; confined to certain regions
Marteiliosis	pis	enzootic; confined to certain regions
Mikrocytosis	pis	low sporadic occurrence, confined to certain regions
American foul brood	api	enzootic, confined to certain regions
European foul brood	api	enzootic, confined to certain regions
Nosemosis of bees	api	enzootic, confined to certain regions
Varroasis	api	exceptional occurrence
Listeriosis	bov	low sporadic occurrence
Toxoplasmosis	bov	low sporadic occurrence
Toxoplasmosis	ovi	low sporadic occurrence
Melioidosis	ovi/ cap	exceptional occurrence
Blackleg	bov	low sporadic occurrence
Botulism	***	low sporadic occurrence
Other clostridial infections	***	enzootic
Other pasteurelloses	bov	low sporadic occurrence
Other pasteurelloses	ovi	low sporadic occurrence
Actinomycosis	***	low sporadic occurrence
Intestinal Salmonella infections	***	low sporadic occurrence
Coccidiosis	***	enzootic
Distomatosis (liver fluke)	***	enzootic, confined to certain regions
Mucosal disease (BVD)	bov	enzootic
Vibronic dysentery	sui	enzootic
Vibronic dysentery	bov	low sporadic occurrence
Contagious pustular dermatitis	***	enzootic
Foot-rot	ovi	enzootic, confined to certain regions

[B (i) cont.]

Contagious ophthalmia	***	enzootic
Enterotoxaemia	ovi	enzootic
Caseous lymphadenitis	ovi/ cap	enzootic

*** Key**

api: bees
avi: avian
bov: bovine
can: canine
cap: caprine
equ: equine
lep: hare/rabbit
ovi: ovine
pis: fish, (incl. crustaceans or molluscs)
sui: swine

[B (i) cont.]

(C)	Plant diseases		Outbreaks by year			
Disease	1991	1992	1993	1994	1995	1996
Paw Paw Blackspot (<i>Asperisporium caricae</i>)	X					
Citrus canker (<i>Xanthomonas campestris</i> pv. citri)	X		X			
Potato cyst nematode (<i>Globodera rostochiensis</i>)	X	X				
Strawberry angular leafspot (<i>Xanthomonas Fragariae</i>)			X			
Lupin Anthracnose (<i>Collectotrichum gloeosporioides</i> VCG 2)						X
Gladiolus Rust (<i>Uromyces transversalis</i>)						X
Raspberry crown rot (<i>Phytophthora fragariae</i> pv. rubi)						X
Sorghum Ergot (<i>Claviceps africana</i>)						X

4. CONFIDENCE BUILDING MEASURE "C"

Policy on Publication of Results

The research program is in its infancy, and early research results are being readied for publication now. The policy of the Defence Science and Technology Organisation is to publish results of general scientific value in the open literature in scientific journals. Information that is more specialised and relevant particularly to Defence is published in laboratory reports, which are unclassified and available to the public, unless they contain information that might prejudice the security of Australia. It is envisaged that all results of the biological research will be unclassified.

The office of the Surgeon General Australian Defence Force (SGADF) encourages the publication of scientific reviews of the literature in the biological defence area. Review articles on biological warfare agents have been published in the *Australian Military Medicine Journal* during 1996. *Australian Military Medicine* is freely available to other State parties through the Australian Military Medicine Association.

5. CONFIDENCE BUILDING MEASURE "D"

Promotion of Professional Contacts

Australia welcomes bona fide professional contact with other researchers in matters directly related to the Convention. Contact should be made with the facility described in Form A, part 2 (iii).

Active Promotion of Contacts

1. Planned international forums of exchange

- a. The Technical Cooperation Program (TTCP) Subgroup E Technical Panel 4 - "Medical countermeasures against biological warfare agents" meeting.
- b. Office of the Surgeon General Australian Defence Force (SGADF). Aeronautical and Maritime Research Laboratory (AMRL).
- c. March 1997.
- d. Canada.
- e. TTCP Biological Defence programs, collaborative research, advances in biotechnology.
- f. Membership of TTCP Subgroup E.
- g. Dr M R Alderton, Aeronautical and Maritime Research Laboratory, PO Box 4331, Melbourne 3001, Australia. Phone 03 96298420 Fax 03 9629 8410.

6. CONFIDENCE BUILDING MEASURE "E"

Declaration of Legislation, Regulations and Other Measures

Australia has the following Australian Government legislation, regulations and other measures to declare under this confidence-building measure.

Crimes (Biological Weapons) Act 1976

The Act, which is administered by the Attorney-General, makes it unlawful for Australians to develop, produce stockpile or otherwise acquire or retain microbial or other biological agents or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; or weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

The Act extends to the acts of Australian citizens outside Australia.

Contravention of the Act is an indictable offence.

Crimes (Biological Weapons) Regulations 1980

The Regulations specify the way in which substances acquired under the Act should be stored, disposed and analysed.

Customs Act 1901 and Customs (Prohibited Exports) Regulations

Under the Customs (Prohibited Export) Regulations the Minister for Defence controls, through a system of export licenses, the export of defence and related goods from Australia. These Regulations were amended in December 1996 to bring all export licensing requirements for defence and related goods under a single regulation - Regulation 13E. No substantial change was made to the regulations relating to the export licensing requirement for biological agents, toxins or equipment which could be used to assist a biological weapons program.

The Regulations require exporters to obtain a licence before proceeding to export certain listed items. These goods are listed in the "Defence and Strategic Goods List". Part 1 of this list includes biological agents designed or adapted to produce casualties in human beings; equipment designed or adapted for disseminating biological agents; goods designed or adapted for the detection, identification or defence against biological agents; and goods including software designed or adapted for the purposes of producing any of the previous items. Part 3 of the list includes human pathogens and toxins, animal pathogens, plant pathogens and equipment capable of being used to develop biological weapons.

[Form E cont.]

Quarantine Act 1908 and Regulations

The Act is designed to prevent the introduction into Australia of serious pests and diseases affecting humans, plants and animals. Accordingly, in conjunction with the Biological Control Act (see below) it controls rather than prohibits the import into Australia of all biological material.

The Act is administered by the Australian Quarantine and Inspection Service (AQIS) within the framework of the government's quarantine policy.

All biological agents require prior permission to import. Under the provisions of Section 13 of the Act, goods of biological origin, including human pathogenic micro-organisms and toxins, may only be imported into Australia if approval has been given by the Director of Human Quarantine.

In giving approval, the Director may require that the importer adhere to certain conditions or requirements, including, but not limited to, the storage, transportation, distribution and disposal of the goods, the use to which the goods may be put, and the personnel authorised to handle or use the goods.

Import conditions vary depending on the nature of the organisms, and on the risks involved. High risk organisms such as serious pathogens of humans, animals and plants which might be considered as potential biological weapons would only be permitted under the most stringent, high security conditions. Very few such imports are approved, and generally those would be for diagnostic research in preparation for emergency responses to specific serious exotic disease incursions.

Penalties for the importation of controlled goods without a permit, and for breaches of permit requirements, are severe and may include a fine, imprisonment or both.

Biological Control Act 1984 and Regulations

This Act is administered by the Australian Quarantine and Inspection Service (AQIS) within the framework of the government's quarantine policy. It provides powers additional to those of the Quarantine Act in order to regulate the release of biological agents for the control of pests, diseases and weeds.

[Form E cont.]

Therapeutic Goods Act 1989 and Regulations

The Therapeutic Goods Administration of the Department of Department of Human Services and Health regulates therapeutic goods for human use under this Act. The Act covers the import and export of therapeutic goods and would include pathogenic micro-organisms where these are included in vaccines for human use.

Prior to initial supply for human use, products must be entered in the Australian Register of Therapeutic Goods. Vaccines are registerable products and undergo evaluation by the Therapeutic Goods Administration prior to entry in the Register.

Weapons of Mass Destruction (Prevention of Proliferation) Act 1995 and Regulations

The Act is administered by the Department of Defence and complements the existing barriers contained in the Customs Act 1901 and the Customs (Prohibited Exports) Regulations. It prohibits the supply or export of goods, not otherwise controlled by the Customs Act 1901, or to provide services, in circumstances where the goods, or the services, will or may be used in, or assist the development, production, acquisition or stockpiling of biological weapons or their delivery systems. The prohibitions under the legislation apply where the person involved knows or suspects the connection with a biological weapons program.

The Act applies extraterritorially as well as within Australia, covering the activities of Australian citizens or residents, as well as bodies incorporated in Australia. It provides a mechanism for exporters to obtain written guidance from the Government on the risk of a particular planned transaction contributing to a biological weapons program.

Guidelines to prevent the inadvertent supply of biological weapons applicable plant, equipment, source cultures and expertise.

The Guidelines are a non-statutory, non-proliferation measure, developed by the Department of Foreign Affairs and Trade, to raise the awareness of industry and researchers about the risk of inadvertent involvement in the biological weapons programs of other countries. The Guidelines have been circulated to the biological industry, universities, relevant professional associations and government agencies.

[Form E]

Declaration of Legislation, Regulations and other Measures

Relating to	Legislation	Regulations	Other Measures	Amended Since Last Year
(a) Article 1	Yes	Yes	No	No
(b) Exports of micro-organisms* and toxins	Yes	Yes	Yes	Yes
(c) Imports of micro-organisms* and toxins	Yes	Yes	No	No

*Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

7. CONFIDENCE BUILDING MEASURE "F"

Declaration of Past Activities in Offensive and/or Defensive Biological Research and Development Programs

1. **Date of Entry into force of the Convention for Australia**
5 October 1977
2. **Past offensive biological R & D program**
No
3. **Past defensive biological R & D Program**
No, but see the explanatory statement attached.

Attachment to Form F

**EXPLANATORY STATEMENT
RESEARCH AND DEVELOPMENT PROGRAMS RELATED TO
BIOLOGICAL WARFARE AND DEFENCE IN AUSTRALIA
SINCE 1 JANUARY 1946**

Since 1 January 1946, Australia has had no R&D program specifically aimed at biological warfare or defence against it. However, some methods for protection against chemical warfare agents could also be used to protect against biological agents. As Australia has had a long standing R & D program to develop protection against chemical agents, it has, though only incidentally, also been involved in the development of means capable of offering some protection from biological weapons.

The Position at the end of World War II

During World War II, Australia acquired a protective capability against chemical and biological warfare (CBW), which included the equipping of military units with protective clothing, respirators, detection apparatus and decontamination equipment. This capability was associated with the threat of chemical warfare, as almost all of the major combatants possessed chemical weapons.

Australia had no biological weapons and knew little about them. While a need for some defence against them was generally perceived, no major specific steps were taken to achieve this. The tendency was to regard chemical and biological weapons as a single category of threat, with biological weapons treated as the lesser element.

The Situation from 1945 to the 1970s

In the late 1940's and 1950's Defence committees assessed the need for defence against biological agents. The view adopted was that if a biological threat arose, Defence authorities would co-opt staff from public health facilities who were trained in microbiology and biological sciences.

Since 1965 Australia has received limited information on biological defence from the United States of America, the United Kingdom, and Canada through the Technical Cooperation Program (TTCP). Under TTCP there is provision for collaborative research on biological defence, but Australia has never participated in that research.

During the 1960's and 1970's some research was conducted in an Australian Defence laboratory on toxins and venoms from Australian animals and plants. The research had no biological warfare focus, and was undertaken solely for the purpose of developing expertise in toxicology. The results of the research were published in scientific journals, contributing to the open scientific literature.

[Attachment to Form F cont.]

The Situation from 1970s to 1994

During this period the policy was to maintain a watching brief on developments in biological warfare defence research so that a competency could be maintained to advise on policy and to give direction to training for the Australian Defence Force. This competency was derived from the open literature and from Australia's partners under The Technical Cooperation Program (TTCP).

No research on defence against toxins (or other biological warfare agents) was undertaken during this period.

Australia did, however, maintain an R&D program into chemical defence and the protective aspects of this program had some incidental common utility in biological defence.

The Current Situation

In 1994, it was recognised that Australia's knowledge of toxins as warfare agents needed to be strengthened if appropriate advice on defensive measures was to be given to the Australian Defence Force and in support of the country's arms control objectives. Consequently, the Government gave approval to commence a modest program of research into defence against toxins as warfare agents.

It was also recognised that the Government needed advice on defence against biological weapons if it was to pursue its aims of strengthening the Biological Weapons Convention. Consequently, the policy of maintaining only a watching brief on BW defence research was modified to allow research into BW defence that did not involve pathogenic reproducing organisms. Such activities as epidemiological studies, computer simulations and studies of the detection of toxins can now be undertaken.

It is expected that this research will allow Australia to play a larger part in those Panels of TTCP that deal with BW defence research and obtain access to more information held by our cooperative partners.

Australia still maintains its active program into researching protective aspects of defence against chemical agents which could have some incidental common utility in defence against biological weapons.

Australia's most recent statement on Defence policy appeared in November 1994 in a document entitled *Defending Australia, Defence White Paper, 1994*. The policy on BW defence research is contained in the statement:

"The Government has a modest program of research into defence against nuclear, biological and chemical weapons".

8. CONFIDENCE BUILDING MEASURE "G"

Declaration of Vaccine Production Facilities

The only manufacturer licensed by the Australian government to produce vaccines for the protection of humans, (that is, licensed pursuant to the Therapeutic Goods Act 1989), is CSL Limited, 45 Poplar Road, Parkville, VICTORIA. The license requires the manufacturer to comply with principles of good manufacturing practice.

Declaration of Vaccine Production Facilities

1. Name of Facility

CSL Limited

2. Location (mailing address)

45 Poplar Road, PARKVILLE VICTORIA 3052, AUSTRALIA

3. General Description of the types of diseases covered

Vaccine products must be entered in the Australian Register of Therapeutic Goods prior to supply of the products for human use. CSL products which are registered are:

- Diphtheria Tetanus vaccine
- Cholera vaccine
- Diphtheria vaccine
- Influenza vaccine
- Pertussis vaccine
- Tetanus toxoid vaccine
- Triple antigen (diphtheria, tetanus, pertussis)
- Typhoid vaccine
- Q fever vaccine
- Plague vaccine
- Yellow fever vaccine

Further information on CSL is provided under confidence-building measure A at Form A part 1.

AUSTRIA**(23 April 1997)**

The Permanent Mission of Austria to the United Nations presents its compliments to the Centre for Disarmament Affairs and has the honour to transmit information as requested by the decisions of the Third Revision Conference 1991 of the Biological Weapons Convention.

As regards infectious diseases covered by the Convention no such cases were reported in Austria. However, it should be noted that not all diseases listed in groups 2, 3 and 4 of the WHO classification are covered by relevant Austrian legislation.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2(i)	☒	☐
A, part 2(ii)	☒	☐
A, part 2(iii)	☒	☐
B (i)	☒	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☐	☒
F	☒	☐
G	☐	☒

Please mark the appropriate box(es) for each measure, with a tick.)

Date 9 April 1997

Form A, part 1Exchange of data on research centres and laboratories 1/

1. Name(s) of facility^{2/} BIOMEDICAL RESEARCH CENTER
..... IMMUNO AG; Uferstrasse 15, A-2304 Orth.a.d.Donau
2. Responsible public or IMMUNO AG
private organization
or company
3. Location and postal address INDUSTRIESTRASSE 67
..... 1220 WIEN
.....
.....
4. Source(s) of financing of the reported activity, including indication if
the activity is wholly or partly financed by the Ministry of Defence
..... PRIVATE
5. Number of maximum containment units ^{3/} within the research centre and/or
laboratory, with an indication of their respective size (m²)
..... 4 BL4 4 x 19,17 m²
..... 32 BL3 (e 678,08 m²)
6. If no maximum containment unit, indicate highest level of protection
..... BL4
7. Scope and general description of activities, including type(s) of
micro-organisms and/or toxins as appropriate
Hepatitis vaccine development
Development of HIV-vaccine
Chimpanzee quarters of HIV-infected chimps
Vaccinia virus as vector for expression studies
Handling and processing of large scale virus preparations

-
- 1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
 - 2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
 - 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form EDeclaration of Legislation, Regulations and Other Measures

<u>RELATING TO</u>	<u>LEGISLATION</u>	<u>REGULATIONS</u>	<u>OTHER MEASURES</u>	<u>AMENDED SINCE LAST YEAR</u>
a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I ^{a)}	☒ YES / NO	YES / NO	YES / NO	YES / NO
b) Exports of micro- organisms* and toxins	☒ YES / NO	☒ YES / NO	YES / NO	☒ YES / NO
c) Imports of micro- organisms* and toxins	☒ YES / NO ^{a)}	YES / NO	YES / NO	YES / NO

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

^{a)} for the purpose of prohibition

^{a)} transport

Form G

Declaration of vaccine production facilities

1. Name of Facility: ref. A, part 1
2. Location (mailing address):
3. General description of the types of diseases covered:

BELARUS

(21 April 1997)

The Permanent Mission of the Republic of Belarus presents its compliments to the United Nations Center for Disarmament Affairs and has the honor to submit hereby annual national data and information pertaining to the implementation by the Republic of Belarus of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction.

На третьей Конференции по рассмотрению действия Конвенции было условлено, что все государства-участники представляют следующее объявление:

1. Объявление по форме: "Объявлять нечего" или "Нет никаких новых изменений, подлежащих объявлению" для использования при обмене информацией

Мера	Объявлять нечего	Нет никаких новых изменений, подлежащих объявлению
A, часть 1	☐	☒
A, часть 2 i)	☐	☒
A, часть 2 ii)	☐	☒
A, часть 2 iii)	☒	☒
B i)	☒	☐
B ii)	☒	☐
C	☐	☒
D	☐	☐
E	☒	☒
F	☒	☒
G	☒	☒

(Просьба применительно к каждой мере поставить галочку в соответствующем квадратике (квадратиках))

Дата 11 апреля 1997 г.

Государство - участник Конвенции Республика Беларусь

2. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "А":

- Часть 1: Обмен данными об исследовательских центрах и лабораториях

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники продолжают осуществлять следующее:

"Обмен данными, включая наименование, местонахождение, охват и общее описание деятельности, об исследовательских центрах и лабораториях, которые отвечают самым высоким национальным и международным нормам безопасности, установленным для использования в разрешенных целях биологических материалов, создающих большую опасность для отдельных лиц и групп людей, или специализируются на разрешенной биологической деятельности, имеющей непосредственное отношение к Конвенции".

Процедуры

Третья Конференция по рассмотрению действия Конвенции условилась, что государствам-участникам следует предоставлять данные по каждому объекту, находящемуся на их территории или под их юрисдикцией или контролем где бы то ни было, который имеет любые лаборатории с максимальным уровнем защиты, отвечающие критериям "максимально изолированной лаборатории", установленным в Руководстве ВОЗ по биологической безопасности в лабораторных условиях 1983 года, т.е. таким критериям, которые определены как уровень 4 биологической безопасности (BL4), или P4, или эквивалентные стандарты.

Форма А, часть 1

Обмен данными об исследовательских центрах и лабораториях 1/

1. Наименование(я) объекта 2/ Белорусский научно-исследовательский институт эпидемиологии и микробиологии МЗ РБ
2. Ответственная государственная или частная организация или компания Министерство здравоохранения Республики Беларусь
3. Местонахождение и почтовый адрес Республика Беларусь, г. Минск, 220030 ул. Б.Цеткин, 4
4. Источник(и) финансирования объявляемой деятельности с указанием случаев, когда она полностью или частично финансируется министерством обороны: Министерство здравоохранения Республики Беларусь
5. Число максимально изолированных подразделений 3/ в рамках исследовательского центра и/или лаборатории с указанием их соответствующих размеров (м²)
... Две лаборатории (производственная площадь 135 м², уровень защиты Р4)
6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты
.....
7. Объем и общее описание деятельности, включая, соответственно, вид(ы) микроорганизмов и/или токсинов
... Ведутся ограниченные исследования по поддержанию штаммовых запасов вирусов Ласса, Мачупо, Марбург, Эбола

1/ Изолированные подразделения, которые являются стационарными лечебными модулями, совмещенными с лабораториями, должны указываться отдельно.

2/ В отношении объектов, имеющих максимально изолированные подразделения, которые участвуют в осуществлении национальной программы исследований и разработок в области биологической защиты, просьба указать наименование объекта и сделать пометку "Объявлен в соответствии с формой А, часть 2 iii)".

3/ В соответствии с Руководством ВОЗ по биологической безопасности в лабораторных условиях 1983 года или аналогичными нормами.

- Часть 2: Обмен информацией о национальных программах исследований и разработок в области биологической защиты

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники должны осуществлять следующее:

В интересах повышения прозрачности национальных программ исследований и разработок в области биологической защиты государства-участники будут объявлять, осуществляют ли они такие программы или нет. Государства-участники согласились представлять на ежегодной основе подробную информацию о своих программах исследований и разработок в области биологической защиты, включая резюме целей и издержки деятельности, осуществляемой силами подрядчиков и в рамках других объектов. В том случае, если никакой программы исследований и разработок в области биологической защиты не осуществляется, представляется "нулевой" доклад.

Государства-участники будут делать объявления в соответствии с прилагаемыми формами, которые предусматривают представление следующей информации:

- 1) цель и резюме осуществляемых исследований и разработок с указанием того, осуществляется ли деятельность в следующих областях: профилактика, изучение патогенности и вирулентности, методы диагностики, аэриобиология, обнаружение, лечение, токсимология, физическая защита, деконтаминация и другие связанные исследования;
- 2) используются ли подрядные или другие необоронные объекты, а также общая сумма средств, выделяемых на осуществление этой части программы;
- 3) организационная структура программы и отношения отчетности в связи с ней; и
- 4) следующая информация, касающаяся оборонных и других государственных объектов, на которых базируется программа исследований и разработок в области биологической защиты:
 - a) местонахождение;
 - b) площадь (m^2) объектов, включая площадь, отведенную под каждую лабораторию уровня BL-2, BL-3 и BL-4;
 - c) общая численность работающих, включая лиц, которые работают по контрактам на основе полного рабочего дня свыше шести месяцев;
 - d) численность сотрудников, указанных в пункте c), по следующим категориям: гражданский персонал, военный персонал, научные работники, техники, инженеры, вспомогательный и административный персонал;
 - e) перечень научной специализации научного/инженерного персонала;
 - f) источник и размеры финансирования по следующим трем областям: исследования, разработки и испытания и оценка; и
 - g) политика в отношении публикаций и перечень общедоступных документов и докладов.

Форма А: часть 2 ii)

Объявление национальной программы исследований и разработок
в области биологической защиты

- 1) Имеется ли национальная программа для проведения исследований и разработок в области биологической защиты на территории государства-участника, под его юрисдикцией или контролем где бы то ни было? Деятельность, осуществляемая в рамках такой программы, включала бы профилактику, изучение патогенности и вирулентности, методы диагностики, аэриологию, обнаружение, лечение, токсинологию, физическую защиту, деконтаминацию и другие связанные исследования.

☒ Да ☐ Нет

Если ответ на вопрос 1) положителен, то нужно заполнить форму А: часть 2 ii), в которой будет содержаться описание программы.

Форма А: часть 2 ii)

Национальная программа исследований и
разработок в области биологической защиты

1. Имеется программа защиты населения от наиболее распространенных на территории Республики Беларусь возбудителей инфекционных и паразитарных заболеваний. Основные исследования в рамках Программы направлены на совершенствование системы эпиднадзора за распространенными инфекционными заболеваниями, разработку средств для диагностики вирусных, бактериальных (включая карантинные и конвенционные), иммунных заболеваний, их профилактики и лечения.

Финансирование Программы - республиканский бюджет.

2. Общая сумма средств, выделяемых на Программу - 8321,5 млн. руб. Из них на 1996 г. - 3638,1 млн. руб.

Основной исполнитель Программы - Белорусский научно-исследовательский институт эпидемиологии и микробиологии.

Форма А: часть 2 iii)

Национальная программа исследований и разработок в области биологической защиты

II. Описание

1. Указать цели и финансирование программы и резюмировать основные исследования и разработки, осуществляемые в рамках программы. Рассматриваемые области должны включать: профилактику, изучение патогенности и вирулентности, методы диагностики, аэриобиологию, обнаружение, лечение, токсикологию, физическую защиту, деконтаминацию и другие связанные исследования.

2. Указать общую сумму средств, выделяемых на программу, и источник финансирования.

3. Осуществляются ли какие-либо аспекты этой программы на основе подрядов с промышленными предприятиями, учебными заведениями или на других неборонных объектах?

Да/Нет

4. Если да, то какая часть всех средств, выделяемых на программу, расходуется на этих подрядных или других объектах?

5. Резюмировать цели и области исследований в рамках программы, осуществляемой подрядчиками и на других объектах за счет средств, указанных в пункте 4.

6. Представить диаграмму организационной структуры программы и схему отчетности (включая отдельные объекты, участвующие в осуществлении программы).

7. Представить объявление согласно форме А: часть 2 iii) по каждому объекту, как государственному, так и негосударственному, значительная часть ресурсов которого используется для осуществления национальной программы исследований и разработок в области биологической защиты на территории государства, представляющего доклад, или под его юрисдикцией или контролем где бы то ни было.

Форма А: часть 2 iii)

Национальная программа исследований и разработок в области биологической защиты

III. Объекты

Заполнить по одному бланку для каждого объекта, объявляемого в соответствии с пунктом 7 в форме А: часть 2 ii).

В случае совместно используемых объектов представить в отношении исследований и разработок в области биологической защиты только следующую информацию.

1. Каково наименование объекта?
2. Где он находится (указать адрес и географическое местонахождение)?
3. Площадь лабораторных помещений с разбивкой по уровню изоляции:
 - BL2 (m^2)
 - BL3 (m^2)
 - BL4 (m^2)
 - Общая площадь лабораторных помещений (m^2)
4. Организационная структура каждого объекта.
 - I) Общая численность сотрудников
 - II) Классификация сотрудников:
 - Военный персонал
 - Гражданский персонал
 - III) Классификация сотрудников по категориям:
 - Научные работники
 - Инженеры
 - Техники
 - Административный и вспомогательный персонал
 - IV) Перечислить научную специализацию научных/инженерных работников.
 - V) Работают ли на объекте подрядные сотрудники? Если да, то указать их примерную численность.

- VI) Каков источник(и) финансирования деятельности, осуществляемой на объекте, с указанием тех случаев, когда деятельность полностью или частично финансируется министерством обороны?
- VII) Каковы размеры финансирования по следующим разделам программы:
- | | |
|--------------------|-------|
| Исследования | |
| Разработки | |
| Испытания и оценка | |
- VIII) Кратко охарактеризовать политику объекта в отношении публикаций:
- IX) Представить перечень общедоступных документов и докладов, явившихся результатом работы, проделанной за предыдущие 12 месяцев. (Указать авторов, названия и полные выходные данные.)

5. Кратко охарактеризовать деятельность в области биологической защиты, осуществляемую на объекте, включая вид(ы) изучаемых микроорганизмов 2/ и/или токсинов, а также наружные исследования биологических аэрозолей.

2/ Включая вирусы и прионы.

3. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "В":

- Обмен информацией о вспышках инфекционных заболеваний и аналогичных явлениях, вызванных токсинами

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники продолжают осуществлять следующее:

"Обмен информацией о вспышках инфекционных заболеваний и аналогичных явлениях, вызванных токсинами, и обо всех таких явлениях, которые, как представляется, отличаются от нормы по своему типу, развитию, месту или времени возникновения. Информация, представляемая относительно аномальных явлений, будет включать данные, как только они станут известными, о типе заболевания, примерной площади поражения и числе случаев заболевания".

Процедуры:

Третья Конференция по рассмотрению действия Конвенции согласовала следующее определение:

"Вспышка заболевания, или эпидемия, представляет собой возникновение необычайно большого или неожиданного числа случаев заболевания или связанного со здоровьем явления в данном месте и в данное время. Число случаев, считающееся необычным, варьируется в зависимости от заболевания или явления и пораженного им контингента людей".

Кроме того, была сделана ссылка на следующие определения:

- "Эпидемия инфекционного заболевания определяется как возникновение необычайно большого или неожиданного числа случаев какого-либо известного заболевания или заболевания предположительно инфекционного происхождения в данном месте и в данное время. Это обычно быстро развивающаяся ситуация, требующая быстрого реагирования" (внутренний документ ВОЗ CDS/Mtg/82.1).
- "Появление в местности или регионе случаев заболевания, связанного со здоровьем специфического поведения или других связанных со здоровьем событий, которые явно выходят за пределы нормы. Местность или район и период времени, где и когда имеют место данные случаи, точно определяются. Число случаев, указывающих на эпидемию, варьируется в зависимости от агента, численности и категории населения, подвергающегося опасности заражения, предыдущего опыта или отсутствия подверженности заболеванию, а также времени и места явления: поэтому эпидемичность соотносится с обычной распространенностью данного заболевания в одной и той же области, среди конкретного населения и в одно и то же время года. Единичный случай инфекционного заболевания, долгое время отсутствовавшего среди какого-либо населения, или первый случай какого-либо заболевания, не зафиксированного ранее в данной области, требует немедленного сообщения о них и полного полевого исследования: два случая такого заболевания, совпавших по времени и месту происхождения, могут быть достаточным основанием для того, чтобы считать их эпидемией" (Last J.M.; A Dictionary of Epidemiology, Oxford University Press, New York, Oxford, Toronto, 1983).

Третья Конференция по рассмотрению действия Конвенции достигла согласия относительно следующего:

1. При определении того, что следует считать вспышкой заболевания, государствам-участникам рекомендуется руководствоваться вышеупомянутыми определениями.

2. Поскольку в отношении того, что может представлять собой отклонение от нормы, не существует каких-либо общепризнанных стандартов, то государства-участники согласились в полной мере использовать действующие национальные системы оповещения о заболеваниях человека, а также, по возможности, о заболеваниях животных и растений и информационные системы, действующие в рамках ВОЗ, в целях ежегодного обновления исходной информации о заболеваниях, вызванных организмами, относящимися к группам риска II, III и IV, согласно классификации, содержащейся в Руководстве ВОЗ по биологической безопасности в лабораторных условиях 1983 года, появление которых в соответствующих областях не обязательно представляет собой отклонение от нормы*.

3. Обмен данными о вспышках заболеваний, которые, как представляется, отклоняются от нормы, имеет особое значение в следующих случаях:

- когда трудно точно определить причину такой вспышки или трудно выявить возбудителя болезни**;
- когда возможными возбудителями болезни являются организмы, относящиеся к группам риска III или IV, согласно классификации, содержащейся в Руководстве ВОЗ по биологической безопасности в лабораторных условиях 1983 года;
- когда возбудитель болезни обычно не встречается в данном регионе;
- когда развитие болезни носит необычный характер;
- когда вспышка заболеваний происходит вблизи исследовательских центров и лабораторий, охватываемых в соответствии с пунктом А обменом данными;
- когда возникают подозрения о возможном возникновении нового заболевания.

4. С целью укрепления доверия первоначальное сообщение о вспышке инфекционного заболевания или аналогичного явления, которое отклоняется от нормы, должно представляться сразу же после обнаружения такой вспышки и впоследствии дополняться ежегодными сообщениями.

* Эту информацию следует представлять в соответствии с формой В i).

** Условлено, что сюда могут входить организмы, которые приобрели патогенные свойства в результате использования таких методов молекулярной биологии, как гениная инженерия.

С тем чтобы дать возможность государствам-участникам применять стандартную процедуру, Конференция решила, что для обмена первоначальной, а также ежегодной информацией следует использовать форму В ii) в той мере, в какой такая информация известна и/или применима.

5. В целях расширения международного сотрудничества в области мирной бактериологической (биологической) деятельности и предотвращения или уменьшения возможности возникновения неясностей, сомнений и подозрений государства-участники призываются приглашать экспертов из других государств-участников для оказания помощи в ликвидации вспышки заболевания, а также благожелательно рассматривать такие приглашения.

Form B (1)

Background information on outbreaks of reportable
infectious diseases

Disease	Number of cases per year				
	1993	1994	1995	1996	1997

Форма В iii)

Информация о вспышках инфекционных заболеваний и аналогичных явлениях, которые, как представляется, отличаются от обычных явлений такого рода

1. Время обнаружения вспышки заболевания
2. Место и приблизительная площадь заражения
3. Вид заболевания/интоксикация
4. Предполагаемый источник заболевания/интоксикации
5. Возможный возбудитель (возбудители) болезни
6. Основные характеристики систем
7. Подробные симптомы в тех случаях, когда это применимо:
 - респираторные
 - кровеносные
 - неврологические/поведенческие
 - кишечные
 - дерматологические
 - нефрологические
 - прочие
8. Отклонение (отклонения) нормы по:
 - типу
 - развитию
 - месту возникновения
 - времени возникновения
 - симптомам
 - вирулентности
 - сопротивляемости лекарствам
 - трудности определения возбудителя (возбудителей)
 - наличием нетипичных переносчиков инфекции
 - прочим признакам
9. Приблизительное число первичных случаев
10. Приблизительное число всех случаев
11. Число летальных исходов
12. Развитие вспышки заболевания
13. Принятые меры

4. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "С":

- Поощрение публикации результатов в содействие использованию знаний

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники продолжают осуществлять следующее:

"Поощрение публикации результатов биологических исследований, имеющих непосредственное отношение к Конвенции, в научных журналах, доступных для государств-участников, а также содействие использованию в разрешенных целях знаний, накопленных в ходе таких исследований".

Процедуры:

Третья Конференция по рассмотрению действия Конвенции достигла согласия относительно следующего:

1. Рекомендуются, как правило, не засекречивать фундаментальные исследования в области биологических наук, в особенности имеющие непосредственное отношение к Конвенции, а также в максимально возможной мере воздерживаться, без ущерба для национальных и коммерческих интересов, от засекречивания прикладных исследований.
2. Государствам-участникам рекомендуется представлять информацию о своей политике в отношении публикации результатов биологических исследований с указанием, в частности, своей политики в отношении публикации результатов исследований, проводимых в исследовательских центрах и лабораториях, охватываемых в соответствии с пунктом А обменом информацией, а также публикации исследований о вспышках заболеваний, предусмотренных в пункте В, и представлять информацию о соответствующих научных журналах и других соответствующих научных изданиях, широко доступных для государств-участников.
3. Третья Конференция по рассмотрению действия Конвенции обсудила вопрос о сотрудничестве и оказании помощи в области обеспечения безопасности при работе с биологическим материалом, подпадающим под действие Конвенции. Она пришла к выводу, что этими вопросами занимаются и другие международные форумы, и высказалась в поддержку усилий, направленных на расширение такого сотрудничества.

ИЗДАТЕЛЬСКАЯ ДЕЯТЕЛЬНОСТЬ
за 1996 год

N п/п	Наименование публикации	Вид публ.	Авторы	Где опу- бликована
1.	Моноклональные антитела к вирусу ЛХМ: получение и предварительная характеристика	Статья	Куницкая Л.Я. Зайцева В.Н. Школина Т.В. Малахова И.В. Сурикова Л.Е. Владыко А.С.	В сб: "Современные пробл. эпидем. и эпид. надзора за инф. болезнями" Мат-лы 9 съезда работн. проф. медицины РБ. Минск, 1996, т.3 (ч.1), с. 174-182.
2.	Разработка иммуноферментных тест-систем для серодиагностики клещевого энцефалита	Тезисы	Куницкая Л.Я. Хватова Л.А. Малахова И.В. Сурикова Л.Е. Владыко А.С.	В сб: "Вирусн. риккетс. и бакт. инф., переносимые клещами", Иркутск, 1996, с.29-30.
3.	Роль вируса ЛХМ в инфекционной патологии человека	Статья	Зайцева В.Н. Марьянкова Р. Владыко А.С.	В сб: "Современные пробл. эпидем. и эпид. надзора за инф. болезнями" Мат-лы 9 съезда работн. проф. медицины РБ. Минск, 1996, т.3 (ч.1), с. 70-74.
4.	Проблема хламидийной инфекции и совершенствование методов лабораторной диагностики	Статья	Титов Л.П. Полещук Н.Н. Грибкова Н.В. Скороход Г.А. Хилькевич Н.Д. Шабанов А.Г. Романюк Е.Н. Гондарев С.В.	В сб: "Современные пробл. эпидем. и эпид. надзора за инф. болезнями" Мат-лы 9 съезда работн. проф. медицины РБ. Минск, 1996, т.3 (ч.1), с. 3-9.

5. Выявление природных очагов болезни Лайма в Брестской и Гродненской областях Беларуси
Статья Трофимов Н.М.
Ерофеева Н.И.
Мороз А.Г.
Верещако Н.С.
Хорраан А.И.
Бородинская Г.
Веденьков А.Л.
Рытик П.Г.
Петкевич А.С.
Титов Л.П.
В сб: "Современные пробл. эпидем. и эпид. надзора за инф. болезнями"
Мат-лы 9 съезда работн. проф. медицины РБ.
Минск, 1996,
т.3 (ч.1),
с. 64-70.
6. Вирусные опасные инфекции: вопросы эпидемиологии и диагностики геморрагических лихорадок
Статья Владимир А.С.
В сб: "Современные пробл. эпидем. и эпид. надзора за инф. болезнями"
Мат-лы 9 съезда работн. проф. медицины РБ.
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Статья Савчук М.М.
Шнейдер В.П.
Владимир А.С.
В сб: "Современные пробл. эпидем. и эпид. надзора за инф. болезнями"
Мат-лы 9 съезда работн. проф. медицины РБ.
Минск, 1996,
т.3 (ч.2),
с. 51-52.
8. Оценка природных очагов болезни Лайма в Беларуси
Статья Трофимов Н.М.
Мороз А.Г.
Ерофеева Н.И.
Ромдотенская
Петкевич А.С.
Титов Л.П.
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9. Completion of the Lassa Fever Virus Sequense and Identification of a RING-Finger Open Reading Frame at the 5' RNA End
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5. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "D":

- Активное содействие контактам

На третьей Конференции по рассмотрению действия Конвенции было условлено, что государства-участники продолжают осуществлять следующее:

"Активное содействие контактам между учеными, другими экспертами и объектами, занимающимися биологическими исследованиями, которые имеют непосредственное отношение к Конвенции, включая обмены и посещения для проведения совместных исследований на взаимно согласованной основе".

Процедуры

Третья Конференция по рассмотрению действия Конвенции достигла согласия относительно следующего:

Для активного содействия профессиональным контактам между учеными, для содействия совместным исследовательским проектам и другим видам деятельности, нацеленным на предотвращение или уменьшение возможностей возникновения неясностей, сомнений и подозрений, и на расширение международного сотрудничества в области мирной бактериологической (биологической) деятельности государствам-участникам рекомендуется по возможности предоставлять информацию:

- о планируемых международных конференциях, семинарах, симпозиумах и аналогичных мероприятиях, посвященных биологическим исследованиям, имеющим непосредственное отношение к Конвенции,
- о других возможностях обмена учеными, проведения совместных исследований или других мероприятий с целью развития контактов между учеными, занимающимися биологическими исследованиями, имеющими непосредственное отношение к Конвенции.

Для того чтобы дать возможность государствам-участникам применять стандартизированную процедуру, третья Конференция по рассмотрению действия Конвенции согласилась, что для обмена информацией по этому пункту следует использовать форму D.

Форма DАктивное содействие контактам1. Планируемые международные конференции, симпозиумы, семинары и другие аналогичные форумы по обмену

По каждому из таких мероприятий следует сообщать следующую информацию:

- название конференции, и т.д.
- проводящая мероприятие организация (организации), и т.д.
- время проведения
.....
- место проведения
.....
- основная тема (основные темы)
конференции, и т.д.
- условия участия
.....
- адрес, по которому следует обращаться для
получения дальнейшей информации, и т.д.

2. Информация, касающаяся других возможностей

.....
.....
.....
.....

Форма 3Планируемые международные конференции, симпозиумы,
семинары и другие аналогичные форумы по обмену

1. Название конференции - Международная конференция "Актуальные проблемы микробиологии"
 2. Проводящая организация - Белорусский НИИ эпидемиологии и микробиологии
 3. Время проведения - 26 - 27 мая 1997 г.
 4. Место проведения - г. Минск
 5. Основная тема конференции - Этиология, диагностика и профилактика бактериальных и анаэробных инфекций
 6. Информация о конференции по адресу: Республика Беларусь, 220050, г. Минск, ул. К. Петкин, 4. Бел НИИ эпидемиологии и микробиологии
-
1. Название конференции - I Международная конференция по вирусным гепатитам - эпидемиология, диагностика, лечение.
 2. Проводящая организация - Белорусский НИИ эпидемиологии и микробиологии
 3. Время проведения - 11 - 12 июня 1997 г.
 4. Место проведения - г. Минск
 5. Основная тема конференции - Этиология, диагностика и профилактика гепатитов
 6. Информация о конференции по адресу: Республика Беларусь, 220050, г. Минск, ул. К. Петкин, 4. Бел НИИ эпидемиологии и микробиологии
-
1. Название конференции - Международная конференция по иммунодиагностике
 2. Проводящая организация - Белорусский НИИ эпидемиологии и микробиологии
 3. Время проведения - сентябрь 1997 года
 4. Место проведения - г. Минск
 5. Основная тема конференции - Иммунодиагностика инфекционных заболеваний
 6. Информация о конференции по адресу: Республика Беларусь, 220050, г. Минск, ул. К. Петкин, 4. Бел НИИ эпидемиологии и микробиологии

6. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "Е"

- Объявление законодательства, правил и других мер

На третьей Конференции по рассмотрению действия Конвенции государства-участники согласились осуществлять следующее:

В качестве характеристики мер, которые они: приняли для осуществления Конвенции, государства-участники объявляют, приняли ли они законодательство, правила или другие меры:

а) для запрещения разработки, производства, накопления запасов, приобретения или сохранения микробных или других биологических агентов или токсинов, оружия, оборудования и средств доставки, оговоренных в статье I Конвенции, в пределах их территории или в любом месте под их юрисдикцией или контролем;

б) в отношении экспорта или импорта микроорганизмов, являющихся патогенными для человека, животных и растений, или токсинов в соответствии с Конвенцией;

Государства-участники заполняют прилагаемую форму (форма Е) и должны быть готовы по соответствующему запросу представить Департаменту Организации Объединенных Наций по вопросам разоружения или отдельному государству-участнику копии такого законодательства или правил или письменные сведения о других мерах. На ежегодной основе государства-участники указывают, также по прилагаемой форме, вносились ли какие-либо поправки в их законодательство, правила или другие меры.

форма Е

Объявление законодательства, правил и других мер

<u>ПРЕДМЕТ</u>	<u>ЗАКОНОДА-</u> <u>ТЕЛЬСТВО</u>	<u>ПРАВИЛА</u>	<u>ДРУГИЕ</u> <u>МЕРЫ</u>	<u>ДОПРАВКИ,</u> <u>ВНЕСЕННЫЕ</u> <u>С ПРОШЛОГО</u> <u>ГОДА</u>
а) Разработка, производство, накопление запасов, приобретение или сохранение микробных или других биологических агентов или токсинов, оружия, оборудования и средств доставки, оговоренных в статье I	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ
б) Экспорт микроорганизмов* и токсинов	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ
в) Импорт микроорганизмов* и токсинов	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ	ДА/НЕТ

* Микроорганизмы, являющиеся патогенными для человека, животных и растений в соответствии с Конвенцией.

7. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "Г":

- Объявление прошлой деятельности в рамках наступательных и/или оборонительных программ биологических исследований и разработок

В интересах повышения транспарентности и открытости государства-участники объявляют, осуществляли ли они какие-либо наступательные и/или оборонительные программы биологических исследований и разработок с 1 января 1946 года.

Если да, то государства-участники должны представить информацию по таким программам в соответствии с формой "Г".

форма F

Объявление прошлой деятельности в рамках наступательных и/или оборонительных программ биологических исследований и разработок

1. Дата вступления в силу Конвенции для государства-участника
2. Прошлые наступательные программы биологических исследований и разработок:
 - ДА - НЕТ
 - Период(ы) деятельности
 - Резюме исследований и разработок с указанием того, касалась ли осуществлявшаяся деятельность производства, испытаний и оценки, взятия на вооружение, накопления биологических агентов, программы уничтожения таких агентов и оружия и других связанных исследований.
3. Прошлые оборонительные программы биологических исследований и разработок:
 - ДА - НЕТ
 - Период(ы) деятельности
 - Резюме исследований и разработок с указанием того, осуществлялась ли деятельность в следующих областях: профилактика, изучение патогенности и вирулентности, методы диагностики, аэриобиология, обнаружение, лечение, токсинология, физическая защита, деконтаминация, - а также других связанных исследований, с указанием, по возможности, местонахождения.

8. МЕРА УКРЕПЛЕНИЯ ДОВЕРИЯ "G":

- Объявление объектов по производству вакцин

Для дальнейшего повышения транспарентности биологических исследований и разработок, связанных с Конвенцией, и расширения научно-технических знаний, согласно положениям статьи X, каждое государство-участник объявляет все объекты, как государственные, так и негосударственные, находящиеся на его территории или под его юрисдикцией или контролем где бы то ни было, производящие вакцины, разрешенные государством-участником для защиты людей. Информация представляется по прилагаемой форме G.

форма G

Объявление объектов по производству вакцин

1. Наименование объекта:
 2. Местонахождение (почтовый адрес):
 3. Общее описание видов охватываемых заболеваний:
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BULGARIA**(12 April 1997)**

THE PERMANENT MISSION OF THE REPUBLIC OF BULGARIA TO THE UNITED NATIONS PRESENTS ITS COMPLIMENTS TO THE CENTRE FOR DISARMAMENT AFFAIRS AND IN ACCORDANCE WITH RESOLUTION 46/35 A ENTITLED " THIRD REVIEW CONFERENCE OF THE PARTIES TO THE CONVENTION ON THE PROHIBITION OF THE DEVELOPMENT, PRODUCTION AND STOCKPILING OF BACTERIOLOGICAL/BIOLOGICAL/ AND TOXIN WEAPONS AND THEIR DESTRUCTION", ADOPTED BY THE GENERAL ASSEMBLY ON 6 DECEMBER 1991, HAS THE HONOUR TO PRESENT TO HIM THE REPLY OF THE GOVERNMENT OF THE REPUBLIC OF BULGARIA ON THE ABOVE MENTIONED RESOLUTION.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	See Annex I	
A, part 2(i)	☒	☐
A, part 2(ii)	☒	☐
A, part 2(iii)	☒	☐
B (i)	☒	☐
B (ii)	☒	☐
C	See Annex I	
D	☒	☐
E	☐	☒
F	☒	☐
G	See Annex I	

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 11 April 1997 Republic of Bulgaria
 State Party to the Convention Republic of Bulgaria

ANNEX I
to the Declaration of the Republic of Bulgaria
11 April 1997

1. Amendment to the Information supplied in 1992 under Confidence Building Measure "A - part 1", and Confidence Building Measure "G"

Measure "A - part one" , and Measure "G" :

The National Center for Infectious and Parasitic Diseases (Included as a research center under Measure "A- part 1", and as a vaccine production facility under Measure "G") has changed its address, without changing its location, to:

National Center for Infectious and Parasitic Diseases
26 Yanko Sakazov Blvd.
1504 Sofia, BULGARIA

Phone: (+ 359 2) 442 875

Fax: (+ 359 2) 943 3075

E-mail: 0473@main.infotel.bg

2. Additional Information to Confidence Building Measure "C"

Measure C :

There is an additional title in the list of Bulgarian scientific publications under Confidence Building Measure "C" :

Problems of Infectious and Parasitic Diseases

This is a specialized medical journal and is published twice a year by the National Center for Infectious and Parasitic Diseases.

Problems of Infectious and Parasitic Diseases is covered by the Excerpta Medica database EMBASE since 1996.

The journal publishes articles on the theory and practice of infectology written by outstanding Bulgarian scientists as a result of their research.

CANADA

(15 April 1997)

**Annual Report
of
Confidence Building Measures
Biological and Toxin Weapons Convention**

CONFIDENCE BUILDING MEASURE A (Part 1)

Exchange of Data on Research Centres and Laboratories - #1

1. Name(s) of the research centre and/or laboratory
National Laboratory for Disease Control
2. Responsible public or private organization or company
Health Canada
3. Location and postal address
1015 Arlington Avenue,
Winnipeg, Manitoba
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Canadian Government - Health Canada
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m₂)

1 unit (185 m²)
6. If no maximum containment unit, indicate highest level of protection

Level 3 - 3 units (280m², 235m², and 230m²)
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The Institute is a national centre of expertise that provides diagnostic and research services on human diseases and public health intelligence service.

The center will not be operational until later this year.

CONFIDENCE BUILDING MEASURE A (Part 1)**Exchange of Data on Research Centres and Laboratories - #2**

1. **Name(s) of the research centre and/or laboratory** Health of Animals and Food Laboratory
2. **Responsible public or private organization or company** Agriculture & Agri-Food Canada Animal & Plant Health Directorate
3. **Location and postal address** 3400 Casavant Blvd. West
St. Hyacinthe, Quebec
J2S 7S4
4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Canadian Government - Agriculture and Agri-Food Canada
5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)**
6. **If no maximum containment unit, indicate highest level of protection**

Level 3 - 2 units (115m²) and 483m²)
7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The laboratory provides diagnostic services in support of the National Animal Health and Agri-Food Safety Programs. This site is the center of expertise for indigenous porcine diseases.

CONFIDENCE BUILDING MEASURE A (PART 1)

Exchange of Data on Research Centres and Laboratories - #3

1. Name(s) of the research centre and/or laboratory Animal Diseases Research Institute, Virus Laboratory
2. Responsible public or private organization or company Agriculture & Agri-Food Canada Animal & Plant Health Directorate
3. Location and postal address 100 Gamelin Blvd.
Hull, Quebec
J8Y 1V9
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Canadian Government - Agriculture and Agri-Food Canada
5. Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)
6. If no maximum containment unit, indicate highest level of protection

Level 3 - 2 units (625m2) and 425m2)
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

The Virus Laboratory supports the National Animal Health Program by conducting research and diagnostic services on foreign and indigenous diseases of livestock and poultry. The laboratory is a section of the Animal Diseases Research Institute at Nepean and is the center of expertise for Foreign Animal Diseases. This site will move to Winnipeg in the fall of 1997.

CONFIDENCE BUILDING MEASURE A (PART 1)**Exchange of Data on Research Centres and Laboratories - #4**

1. **Name(s) of the research centre and/or laboratories** Animal Diseases Research Institute, Lethbridge
2. **Responsible public or private organization or company** Agriculture & Agri-Food Canada Animal & Plant Health Directorate
3. **Location and postal address** P.O. Box 640
Lethbridge, Alberta
T1J 3Z4
4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Canadian Government - Agriculture and Agri-Food Canada and National Defense
5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)**
6. **If no maximum containment unit, indicate highest level of protection**

Level 3 - 800m2
7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The Institute provides veterinary diagnostic services and conducts research to support the National Animal Health and Agri-Food Safety Programs. This site is the center of expertise for indigenous bovine/equine viral diseases, leptospirosis, and non-traditional livestock.

CONFIDENCE BUILDING MEASURE A (PART 1)**Exchange of Data on Research Centres and Laboratories - #5**

1. **Name(s) of the research centre and/or laboratories** Animal Diseases Research Institute, Nepean
2. **Responsible public or private organization or company** Agriculture & Agri-Food Canada Animal & Plant Health Directorate
3. **Location and postal address** 3851 Fallowfield Road
P.O. Box 11300,
Station "H",
Nepean, Ontario
K2H 8P9
4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Canadian Government - Agriculture and Agri-Food Canada

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m2)**
6. **If no maximum containment unit, indicate highest level of protection**

Level 3 - 2 units (450m2) and (550m2)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The Institute is a national center of expertise in avian diseases, brucellosis, germplasm, mycobacteria, and rabies.

It also produces biological reagents used by other laboratories of the Directorate as well as Agriculture Canada's field staff. A program for the evaluation of veterinary biologics is also carried out.

CONFIDENCE BUILDING MEASURE A (PART 1)**Exchange of Data on Research Centres and Laboratories - #6**

1. **Name(s) of the research centre and/or laboratories** National Center for Foreign Animal Disease
2. **Responsible public or private organization or company** Agriculture & Agri-Food Canada
3. **Location and postal address** 1015 Arlington Avenue
Winnipeg, Manitoba
4. **Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence**

Canadian Government - Agriculture and Agri-Food Canada

5. **Number of maximum containment units within the research centre and/or laboratory, with an indication of their respective size (m²)**

2 units (65m²) and (35m²)

6. **If no maximum containment unit, indicate highest level of protection**

Level 3 - 2 units (1050m²) and (1090m²)

7. **Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate**

The Institute is a national center of expertise for Foreign Animal Disease that provides diagnostic and research services on selected livestock and poultry diseases that are foreign to Canada. The center will not be operational until late 1997.

CONFIDENCE BUILDING MEASURE A (PART 1)

Exchange of Data on Research Centers and Laboratories - #7

1. Name(s) of the research centre and/or laboratories Centre for Animal and Plant Health
2. Responsible public or private organization or company. Agriculture and Agri-Food Canada, Animal and Plant Health Directorate
3. Location and Postal address 93 Mount Edward Road
Charlottetown, P.E.I.
C1A 5T1
4. Source (s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Canadian Government - Agriculture and Agri-Food Canada
5. Number of maximum containment units within the research centre and/or laboratory , with an indication of their respective size (m²)
6. If no maximum containment unit, indicate highest level of protection
7. Scope and general description of activities, including type(s) of micro-organisms and /or toxins as appropriate

This site is a centre of expertise for retrovirology

CONFIDENCE BUILDING MEASURE A (Part 1)

Exchange of Data on Research Centres and Laboratories - #8

1. Name(s) of the research centre and/or laboratory Central Public Health Laboratory
2. Responsible public or private organization or company Ministry of Health
Province of Ontario
3. Location and postal address 81 Resources Road
Etobicoke, Ontario
M9P 3T1
Postal Address:
P.O. Box 9000, Terminal "A"
Rexdale, Ontario
M5W 1R5
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

Except for some grant funds, financed completely by the Ontario Government, and operated by the Ontario Ministry of Health.
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m₁)

The maximum containment unit (Biological Containment Level 4) reported last year never became operational. A decision has been taken that it will not be put into operation. There is however, present in the lab, a combined Class III cabinet line and suit capability.
6. If no maximum containment unit, indicate highest level of protection

See #5; other areas higher than level 2 but less than 3
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

Not applicable, see #5

CONFIDENCE BUILDING MEASURE A (Part 1)

Form A: part 2 (i)

National Biological Defence Research and Development Program Declaration

1. Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction and control anywhere? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

For CANADA, YES

Form A: part 2 (ii)

National Biological Defence Research and Development Program

II. Description

1. The objective of the Canadian Biological Defence Program at DRES is to insure that the Canadian Forces are provided with an adequate defence against biological warfare agents. No offensive studies of any kind are permitted by the Government of Canada. The Program is wholly funded by the Department of National Defence Canada on behalf of the Government. The principal research and development areas are the following:
 - a. assessment of the hazards that may be faced by the Canadian Forces from biological agents and toxins;
 - b. detection of biological agents and toxins using immunological, biochemical and physical detection methods;
 - c. medical countermeasures against the infections or intoxications from biological agents and toxins;
 - d. decontamination of biological agents and toxins; and
 - e. studies on the mode of action and toxicity of toxins and the mode of action and infectivity of biological agents.
2. In Canada, the biological and chemical defence programs are combined and it is not possible to separate the funds from the two programs without a detailed analysis of every purchase. In 1994/95 the amount spent on the Canadian biological and chemical defence program, excluding salaries, was \$7.3M. It is estimated that approximately one third of this was spent on biological defence. The source of this funding was the Government of Canada.
3. Yes
4. See answer to question 2. above. About 65% was spent on contracts with industry and universities.
5. Contractors are used to support all of the various aspects of the program listed in paragraph 1 above.
6. In the Department of National Defence, the research and development program in biological defence is the responsibility of the Research and Development Branch. Research and some development is carried out at the Defence Research Establishment Suffield (DRES) and through contractors. The bulk of the development program is carried out from CRAD Headquarters. An organizational chart of that part of DRES responsible for biological defence is attached; only those personnel working on Biological Defence are included.

Form A: part 2 (iii)

National Biological Defence Research and Development Program

III. Facilities

1. Defence Research Establishment Suffield, Medical Countermeasures Section, Detection and Identification Section.

2. The facility is located in Buildings 1, 10 and 67 of Canadian Forces Base Suffield near the village of Ralston, Alberta, Canada. The postal address is

Director General
Defence Research Establishment Suffield
Box 4000
Medicine Hat, Alberta T1A 8K6
CANADA

3. Floor area of laboratory areas in Building 1 by containment level:

BL2 - 417 m²
BL3 - 159 m²
BL4 - 0 m²

The total laboratory floor area in Building 1 used for biological defence work is 868 m². Building 67 provides general laboratory space (no containment) and the area is 304 m². Building 10 is a vivarium and includes general laboratory space. The area of the vivarium is 1134 m².

4. The organizational structure of the facility is:

i.	total number of personnel	23
ii.	division of personnel	
	military	0
	civilian	23
iii.	division of personnel by category	
	scientists	11
	engineers	0
	technicians	9
	admin. and support staff	3

- iv. The following is a list of scientific staff disciplines:

Bacteriology
Immunology
Microbiology
Virology
Biochemistry
Biotechnology
Veterinary Medicine
Medicine
Pharmacology

- v. There are two contractor staff working in biological defence at this facility. They are working to develop medical countermeasures to BW agents. A list of contractors carrying out R&D in biological defence is attached.

- vi. The research in this facility is 100% funded by the Department of National Defence, Canada.

- vii. Funding level estimates

Research	\$ 1,100,000
Development	\$ 2,400,000
Test and Evaluation	\$ NIL

- viii. All staff are encouraged to publish the results of their research in the open literature whenever not precluded by security considerations. There is also an internal publication system which may be used for publications. Generally security considerations only require classification of information that reveals a deficiency in the defensive posture of the Canadian Forces.

- ix. See attached list of publications.

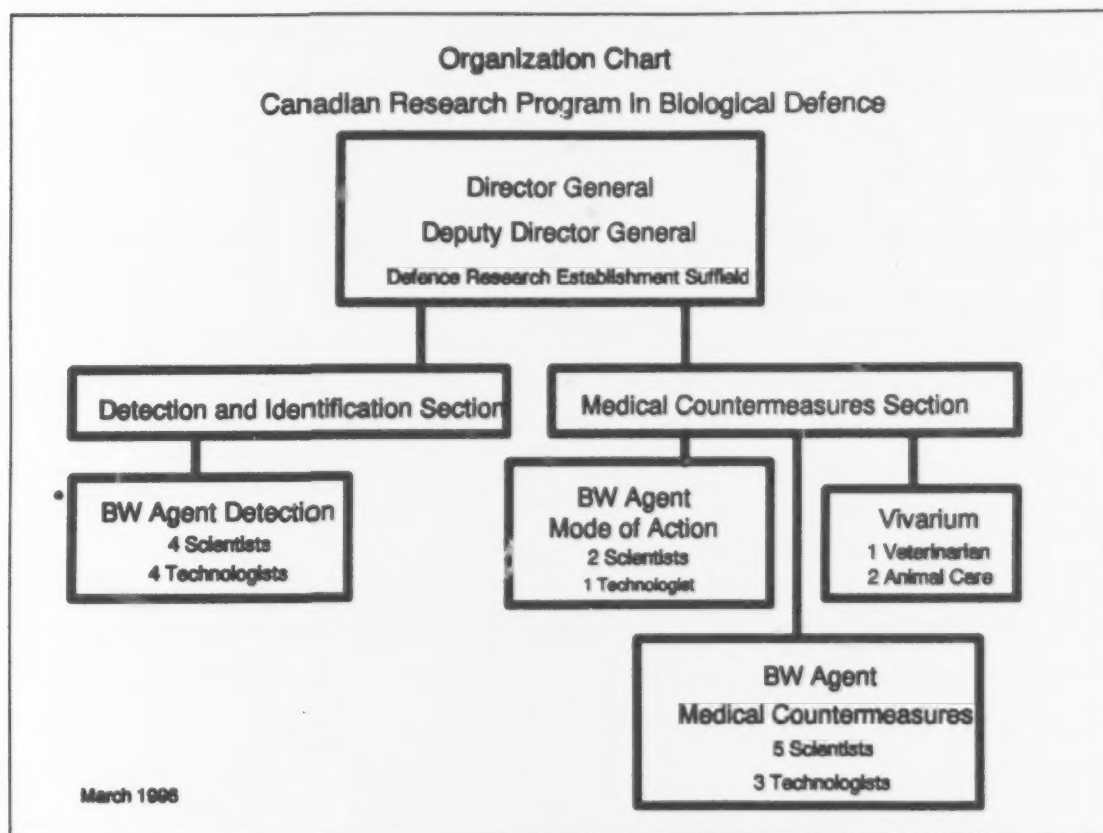
5. The biological defence program at DRES is outlined in Form A, part 2, (ii), paragraph 1 and additional details follow. Assessment of the hazards from biological agents and toxins involves research to understand the dispersion of such agents and is carried out by mathematical modelling techniques. A substantial part of the work in detection is based on exploiting the immunological properties of threat agents, through study and selection of suitable monoclonal and other antibodies, to develop detection techniques to be used in a proposed biochemical detector. Conditions for detection have been optimized for Newcastle Disease Virus (NDV) vaccine, and for Bacillus globigii (BG), as simulants for potential viral agents, and bacteria respectively. Other work related to the biochemical detector dealt with the efficacy of inlet nozzles for collection of aerosols. In medical

countermeasures, research is carried out on new drugs and vaccines and delivery systems, for example microencapsulated antibiotics and vaccines. Microorganisms other than NDV and BG which have been used recently in the biological defence program are F. tularensis, Brucella species (melitensis, suis and abortus), and various influenza virus strains. Toxins used recently include botulinum toxin, staphylococcal enterotoxin B and various venoms from marine organisms, reptiles and insects. Outdoor studies have involved only NDV and BG.

**List of Contractors
Carrying Out Research and Development
in Biological Defence
for the Department of National Defence of Canada**

CONTRACTOR	TITLE
INEX (LIPEX) Pharmaceuticals, Vancouver, British Columbia	Production of Clinical Batches of Liposome-Encapsulated Antibiotics and Vaccines for Use Against Infectious Diseases
Canada West Biosciences, Calgary, Alberta	Production of Humanized Monoclonal Antibodies Against Botulinum Toxin
SciLab Consulting Inc, Redcliff, Alberta	Evaluation of Clinical Applications of Liposome-Encapsulated Ciprofloxacin
University of British Columbia, Vancouver, British Columbia	Studies on Therapy Against Different Marine Toxins
SciLab Consulting Inc, Redcliff, Alberta	Development of Monoclonal Antibodies to Western Equine Encephalitis Virus
University of Saskatchewan, Saskatoon, Saskatchewan	Study on Mechanism of Botulinum Toxin
National Institute of Health, Lima, Peru	Evaluation of Liposome-Encapsulated Ciprofloxacin for the Prevention and Treatment of Brucellosis in Large Animals
Canada West Biosciences, Calgary, Alberta	Passive Immunization to Western Equine Encephalitis
McGill University, Montreal, Quebec	Production, Characterization and In Vivo Efficacy Evaluation of Polymeric Microcapsules and Nanocapsules for the Controlled Release of Antibiotics and Vaccines
University of Calgary, Calgary, Alberta	Development of therapies and experimental vaccines to <i>P. pseudomallei</i> and <i>P. mallei</i>
Equal Air, Division of Quality Properties, Medicine Hat, Alberta	Pressure and Air/Water Balance Testing of Biocontainment Labs
Equal Air, Division of Quality Properties, Medicine Hat, Alberta	Auxillary Systems Testing of Biocontainment Labs

Veterinary Infectious Diseases Organization, University of Saskatchewan, Saskatoon, Saskatchewan	Development of a Mucosal Vaccine Vector for <i>Y. pestis</i>
Canada West Biosciences, Calgary, Alberta	Biological-Based Assay for the Screening of Neutralizing Antibodies to Toxins
Biophage Inc, Laval, Quebec	Identification of commercially available immune modulators
Canada West Biosciences, Calgary, Alberta	Passive Immunization to WEE Virus, Part II: Engineering for Human Therapy
Biofilm Research Group, University of Calgary, Calgary, Alberta	Demonstration and Instruction on the Applications of an Acute Septicemic Rat Trauma Model
Veterinary Infectious Diseases Organization, University of Saskatchewan, Saskatoon, Saskatchewan	Study on the Mode of Action of Botulinum Toxicity
University of Alberta, Edmonton, Alberta	Aerosol Delivery Devices for Liposome-Encapsulated Drugs and Vaccines



Form B (i)

Background information on outbreaks of reportable
infectious diseases

Disease	Number of cases per year						
	1990	1991	1992	1993	1994	1995	1996*
AIDS	1050	1014	1330	1206	1156	1266	- *2
Amoebiasis	1965	1772	1618	1782	1723	1625	1251
Botulism	4	9	9	3	3	16	2
Brucellosis	17	11	15	13	8	7	2
Campylobacteriosis	11817	12741	12392	13437	15723	13697	10372
Chancroid	1	1	2	0	1	1	0
Chickenpox	20254	13687	17788	17547	12756	12408	8781
Chlamydial Infection	35721	39003	46365	44296	27655	37494	24414
Cholera	1	3	5	7	2	5	4
Diphtheria	5	3	2	2	2	2	0
Giardiasis	8786	9168	7486	7063	6523	6306	4791
Monococcal Infections	13822	12457	9253	6832	6167	5303	3914
Monococcal Ophthalmia neonatorum	4	4	4	14	5	19	23
N. Influenzae B (invasive)	413	369	280	117	57	55	56
Hepatitis A	1939	3020	2689	1825	1712	2110	2309
Hepatitis B	3001	2683	2814	2762	3078	3034	2774
Hepatitis C	N/A	224	1319	1638	2856	14070	12389
Hepatitis nonA-nonB	N/A	143	0	3	2	0	1
Hepatitis other & unspecified viral	256	487	N/A	N/A	N/A	N/A	N/A
Legionellosis	87	80	102	83	69	70	63
Leptosy	18	21	16	13	10	10	5
Listeriosis	28	45	32	56	47	54	21
Malaria	417	674	407	485	430	637	744
Measles	1033	6178	2742	203	523	2362	322



Pneumococcal meningitis	119	132	85	71	68	48	32
Other bacterial meningitis	265	626	218	144	124	110	94
Viral meningitis	298	430	368	402	698	194	261
Meningococcal infections	426	419	443	379	334	281	185
Mumps	428	404	319	332	369	403	280
Paratyphoid	16	34	32	26	18	24	10
Pertussis	8030	2724	3605	7401	10151	9800	4798
Plague	0	0	0	0	0	0	0
Poliomyelitis	0	0	1	0	0	1	0
Rabies	0	0	0	0	0	0	0
Rubella	402	704	2265	1028	237	299	237
Congenital Rubella	2	5	1	7	4	4	1
Salmonellosis	8947	9055	6969	6977	6453	6411	5349
Shigellosis	1652	1267	1986	1943	1429	1216	720
Syphilis, early symptomatic	302	365	256	119	140	113	45
Syphilis, Congenital	N/A	N/A	5	4	3	2	1
Syphilis, Early Latent	N/A	N/A	106	63	51	36	14
Other Syphilis	1142	1064	808	686	485	431	247
Tetanus	4	2	4	7	3	6	2
Trichinosis	14	39	30	9	0	9	4
Tuberculosis	1964	1942	2049	2039	2075	1822	865
Typhoid	73	79	101	93	80	77	28
Verotoxigenic E. coli infection	1191	1432	1320	863	1183	1505	873
Yellow Fever	0	0	0	0	0	0	0

ALL FINAL NUMBERS

*Preliminary data

*2 1996 preliminary AIDS figures are not yet available

Source: Division of Disease Surveillance
Laboratory Centre for Disease Control

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and
Promotion of Use of Knowledge:

Agriculture Canada
Department of National Defence
Ontario Ministry of Health

Best copy available

Agriculture and Agri-Food Canada
Animal and Plant Health Directorate

Reprints 1996

- Bielanski, A., Surujballi, O., - 1996
Association of *Leptospira borgpetersenii* serovar Hardjo type hardjobovis with bovine ova and embryos produced by in vitro fertilization. *Theriogenology* 46: 45-55.
- Charlton, K.M.; Casey, G.A. ; Wandeler, A.I.; Nadin- Davis, S. 1996
Early events in rabies virus infection of the central nervous system in skunks (*Mephitis mephitis*). *Acta Neuropathol.* 91:89-98
- Chen S.S.; Charlton K.M. ; Balachandran, A.V. ; O'Connor, B.P. ; Jenson, C.C. 1996
Bovine spongiform encephalopathy identified in a cow imported to Canada from the United Kindom - A case report. *Can. Vet. J.* 37: 38-40
- Cho, Hyun J., Deregt, Dirk, Joo, H - 1996
An ELISA for porcine reproductive and respiratory syndrome: production of antigen of high quality. *Can. J. Vet. Res.* 60: 89-93
- Daoust, Pierre-Yves, Wandeler, Alexander, Casey, G. - 1996
Cluster of rabies cases of probable bat origin among red foxes in Prince Edward Island, Canada. *J. Wild. Dis.* 32: 403-406.
- Forbes, Larry B., tessaro, Stacy V., Lees, Wayne - 1996
Experimental Studies on *Brucella Abortus* in Moose (*Alces Alces*). *J. Wild. Dis.* 32: 94-104.
- Gavora, J., Spencer, J., Benkel, B., etc. - 1996
Endogenous viral genes influence infection with avian leukosis virus.
- Gavora, J., Benkel, B., etc. - 1996
Influence of the alv6 recombinant avian leukosis virus transgene on production traits and infection with the avian tumor viruses in chickens.

- Gilka, F., Spencer, J. - 1996
Extravascular haemolytic anaemia in chicks infected with highly pathogenic Marek's disease viruses.
- Gilbert, S.A. , Larochelle, R., Magar, R., Cho, H.J. , Deregt, D., 1996
Typing of Porcine Reproductive and Respiratory Syndrome virus by a multiplex PCR assay. J. of Clin. Micro. 35: 264-267.
- Harding, M., Prud'homme, I., Gradil, C. et. al. - 1996
Evaluation of nucleic acid amplification methods for the detection of hog cholera virus. J. Vet. Diagn. Invest 8: 414-419.
- Harding, Martha J., Prud'homme, Isabelle, et.al. - 1996
Development of PCR-based Tests for the Identification of North American Isolates of Epizootic Haemorrhagic Disease Virus. Can. J. Vet. Res. 60: 59-64.
- Hechert, R.A. ; Collins, M.S.; Manvell, R.J.; Strong, I.; Pearson, J.E.; Alexander, D.J. 1996
Comparison of Newcastle Disease viruses isolated from cormorants in Canada and the U.S.A. in 1975, 1990, and 1992. Can. J. Vet. Res. 60: 50-54.
- Hechert, R.A.; Riva, J.; Cook, S.; McMillan, J.; Schawartz R.D.; 1996
Onset of protective immunity in chicks after vaccination with recombinant Herpesvirus of turkeys vaccine expressing Newcastle Disease Virus fusion and hemagglutinin neuraminidase antigens. Avian Diseases 40: 770-777
- Lessard, M., Hutchings, D., Spencer, J., - 1996
Cell-mediated and humoral immune responses in chickens infected with Salmonella typhimurium.
- Lin, M., Sugden, E., Jolley, M., etc. - 1996
Modification of the mycobacterium bovis extracellular protein MPB70 with fluorescein for rapid detection of specific serum antibodies by fluorescence polarization.

- Lin, M, Zhou, En-Min, 1996
Evidence that two distinct populations of rabbit anti-idiotypic antibodies are induced by three monoclonal antibodies specific for Bluetongue virus core protein VP7. Microbiol. Immunol. 40: 295-302.
- Lin, M., Zhou, En-Min, Heckert, Robert, - 1996
Induction of antibodies to the bluetongue virus core polypeptide VP7 in sheep by internal image rabbit antiidiotypic antibodies. Viral Immunol. 9: 35-43.
- Lin, M., Neilson, K. - 1996
Binding of the Brucella abortus lipopolysaccharide O-chain fragment to a monoclonal antibody. (Quantitative analysis by fluorescence quenching polarization). J. of Biol. Chem. Vol. 272 no. 5 2821-2827
- Masri, S., Olson, W., Nguyen, P., - 1996
Rapid detection of Bovine Herpesvirus 1 in the semen of infected lls by a nested poloymerase chain reaction assay. Can. J. Vet. Res. 60: 100-107.
- Nadin-Davis, S., Huang, W., Wandeler, A. - 1996
The design of strain-specific polymerase chain reactions for discrimination of the raccoon rabies virus strain from indigenous rabies viruses of Ontario. J. Virol. Methods 57: 141-156.
- Zhou, En-Min,; Chan, K.H., 1996
Immunoblot assay as a confirmatory test of competitive ELISA for serodiagnosis of bluetongue. J. Vet. Diagn. Invest. 8: 365-367.

1996

DEPARTMENT OF NATIONAL DEFENCELIST OF PUBLICATIONSON RELATED BIOLOGICAL RESEARCHOPEN LITERATURE

1. Jericho, K.W.F., Kozub, G.C., Loewen, K.G. and Ho, J. (1996) Comparison Of Methods To Determine The Microbiological Contamination Of Surfaces Of Beef Carcasses By Hydrophobic Grid Membrane Filters, Standard Pour Plates Or Flow Cytometry. Food Microbiology, 13:303-309.
2. Ho, J. (1996) Real Time Detection Of Biological Aerosols With Fluorescence Aerodynamic Particle Sizer (FLAPS) J. Aerosol Sci. Vol. 27, Supplement 1, S581-582.
3. P.H. Bach, A.E.M. Vickers, R. Fisher, A. Baumann, E. Brittebo, D.J. Carlisle, H.J. Koster, B.G. Lake, F. Salmon, T.W. Sawyer, and G. Skibinski. The use of tissue slices for pharmacotoxicology studies. The report and recommendations of ECVAM Workshop 20. ATLA 24: 893-923, 1996.
4. Bhatti, A.R. and Micusan, V.V. (1996). A mouse modal for staphylococcal enterotoxins toxicity. MICROBIOS 86: 247-253.
5. Bhatti, A.R. and Micusan, V.V. (1997). Staphylococcal enterotoxins as potential health hazard agents. Pak. J Biochem. (in press).
6. Saravolac, E.G., Kournikakis, B., Gorton, L.C. and J.P. Wong. 1996. The effect of liposome-encapsulation on the antiviral and immunomodulation activities of interferon- γ . Antiviral Research 29: 199-207.
7. Wong, J.P., Saravolac, E.G., Clement, J.G. and L.N. Nagata. (In press). The use of an HID₅₀ (hypothermia-inducing dose 50) as a potential alternative to the LD₅₀ as a measure of viral virulence. Laboratory Animal Science.
8. Cherwonogrodzky, J.W. and K. Lotfali. 1996 (accepted). "Bacteriophage Replacement of Antibodies in an Enzyme-Linked Viral Assay (ELVirA) to Detect *Brucella abortus*." In: Frank, J.F., The United Nations University Brucellosis Research Network, United Nations University Press, Tokyo.

9. Cherwonogrodzky, J.W., and V.L. Di Ninno. 1996 (accepted). "The Use of Bacterial Virulence Factors to Improve Liposomal Formulations for Antibiotic Delivery", In: Frank, J.F., The United Nations University Brucellosis Research Network, United Nations University Press, Tokyo.
10. Cherwonogrodzky, J.W., and P. Wu. 1996 (accepted). "Use of GammaBind GTM to Enhance the Sensitivity of an Enzyme-linked Immunosorbent Assay for Brucellosis Detection." J. Rapid Methods Automation Microbiol.

SUFFIELD REPORTS AND MEMORANDA

11. Fulton, R.E., Stadnyk, L., and Kayfish, C. Antibody-based Hand-Held Test Kits for Monitoring and Identification of Toxins and Biological Warfare Agents: Procedures for NATO Project Group 32 Phase II Round Robin Trials. Suffield Special Publication No. 185, 1996.
12. Boulet, C.A.; Ho, J.; Stadnyk, L.; Thompson, H.G.; Spence, M.R.; Luoma, G.A.; Fulton, R.E.; Lee, W.E. (1996) Report on the Canadian Integrated Biological Detection System: Trial Results of the Combined Joint Field Trials II for Biological Detection. Suffield Report No. 652, (Unclassified).
13. Bader, D.E., Fisher, G.R. and Lee, W.E. (1996). "Gene Probe Assay of Viral Nucleic Acid Using a Silicon Biosensor". DRES Suffield Memorandum No. 1471. UNCLASSIFIED.
14. Bader, D.E. and Gray, D. (1996). "Evaluation of a Sandwich Gene Probe Assay for Newcastle Disease Virus". DRES Suffield Memorandum No. 1474. UNCLASSIFIED.
15. M.G. Hamilton and P.M. Lundy (1996). Efficacy of Medical Countermeasures against CA9542 and CA9543 (U). Suffield Report No. 667. SECRET.
16. Hamilton M.G. Toxins: The Emerging Threat. Suffield Special Publication 184 (Position Paper) 1996.
17. S.H.C. Liang, B. Kournikakis and B. Lacroix. Antimicrobial Properties of Impregnated Carbon Particles (U). Suffield Memorandum No. 1483 December 1996 (UNCLASSIFIED)
18. B. Kournikakis, R.K. Harding, J.R.A. Tremblay and M. Simpson. Assessment of Commercial Alternatives to the C4 Mask for use in Moderate to High Risk Biological Scenarios (U). Suffield Memorandum No. 1487 December 1996 (UNCLASSIFIED)

MOU/TTCP/NATO PUBLICATIONS

19. Bader, D.E., Fisher, G.R. and Lee, W.E. (1996). "Gene Probe Assay of Viral Nucleic Acid Using a Silicon Biosensor". Submitted at the 23rd Meeting of SICA Subpanel VII, Madrid, Spain, May 1996. AC/225 (PANEL VII/SICA) D/60 Serial No. 4. UNCLASSIFIED.

20. Bader, D.E. (1996). "Identification Criteria for Microbial Agents". Draft Proposal for SICA Handbook. Submitted at the 23rd Meeting of SICA Subpanel VII, Madrid, Spain, May 1996. UNCLASSIFIED.

PRESENTATIONS

21. Ho, J. , "Biological Aerosol Detection with FLAPS at the 1995 JFT2 in Dugway". ERDEC 1996 Conference on Obscuration and Aerosol Research, 25-28 June 1996, Edgewood, MD.

22. Bader, D.E., Cherwonogrodzky, J., Heather, N., Kournikakis, B., Laidlaw, B., Nagata, L., Schmaltz, F., Spence, M., Lawrence, J. and Piea, J. (1996). "Upgrade of a Biological Containment Level 3 Facility at Defence Research Establishment Suffield". Presented at the 1996 American Biological Safety Association Conference, Salt Lake City, Utah, Oct 1996. DRES PM96-031. UNCLASSIFIED.

23. Nagata, L.P. (1996) Treatment and prophylaxis of virus infections. University of Calgary. Lecture for MDSC 612, Department of Microbiology and Infectious Diseases.

24. Mah, D., S. Jager, M. Mah, K. Pon, S. Masri, E. Fulton and L.P. Nagata (1996) High-level expression of scFv to BoNT/A in E. Coli under the control of the T7 promoter. Abstract for 7th IBC Conference on Antibody Engineering, San Diego, CA.

25. B. Kournikakis, R.K. Harding, J.R.A. Tremblay and M. Simpson
Assessment of Commercial Alternatives to the C4 Mask for use in Moderate to High Risk Biological Scenarios (U). Suffield PM No. 96-061. Presented to CHS Staff, Ottawa, December 1996

26. Cherwonogrodzky, J.W., J.P. Wong, V.L. Di Ninno, V.R. Lord, and O.C. Marino, and J.P. Wong. 1996. "A Polysaccharide Vaccine to Enhance Immunity Against *Brucella* Species", 7th International Congress for Infectious Diseases, Hong Kong, abstract 11029, 1996.

27. Cherwonogrodzky, J.W., K. Lotfali and J.P. Wong. 1996. "Bacteriophage Replacement of Antibodies in an Enzyme-Linked Viral Assay to Detect *Brucella abortus*", 7th International Congress for Infectious Diseases, Hong Kong, abstract 11030.

ONTARIO MINISTRY OF HEALTH
PUBLICATIONS & PRESENTATIONS

LABORATORY SECTION: BIOCHEMISTRY

YEAR:1996/1997

1. Publication(s) in Referred Journals:
(These are peer reviewed journals e.g. J. Clin Micro. Can J. Inf Dis. Can J. Micro, etc.)

Type of Publications:

Research papers, scientific articles, notes, reviews, etc.

- 1.1 Wang ST, Pizzolato S, Demshar HP. Evaluation of Isolab Phenylalanine and Wallac Quantase Phenylalanine Kits for Newborn Phenylketonuria Screening. Clin Chem 1996; 42: S306.

- 2 Publications of Chapter/Book: Nil

3. Publication(s) in non-referred Journals:
These are "Not peer reviewed" journals and newsletters e.g. PHLO, CBR, CDWR, BioFeedback, MMWR.

Type of Publications:

Scientific/non-scientific articles, notes, technical correspondence, epidemiological summaries, etc.

- 3.1 Wang ST. The Decline of Blood Lead Levels in Ontario Children Since 1984. Labstract 1997.

4. Abstracts/Posters:
(Prepared for scientific associations meetings, open-house demonstrations, technical and ministerial meetings, etc.).

Nil

5. Presentations at Scientific Societies meetings:
(e.g. ASM, ASCP, CACMID, CSM, IAMFES, etc.)
 - 5.1 Wang CT, Pizzolato S, Demshar HP. Evaluation of Isolab Phenylalanine and Wallac Quantase Phenylalanine Kits for Newborn Phenylketonuria Screening. Presented by Dr. S. Wang at the 1996 48th National Meeting - American Association for Clinical Chemistry and Canadian Society of Clinical Chemist, July 28 - August 1, Chicago, IL.
6. Presentation of seminars (scientific/administrative):
(e.g. ALC, In-house training, advisory committee, directors/head tech. meetings, etc.).
 - 6.1 Investigation of New Screening Technologies for Phenylketonuria Using the Receiver Operating Characteristic Plots, presented by Dr. S. Wang on November 28, 1996 at the Laboratory Services Branch, Ontario Ministry of Health, Etobicoke.

PUBLICATIONS AND PRESENTATIONS

LABORATORY/SECTION: CLINICAL BACTERIOLOGY

YEAR: 1996/1997

1. Publications in Refereed Journals

- 1.1 Hanley W, Demshar H, Preston M, Borczyk A, Schoonheydt W, Clarke J, Feigenbaum A. Newborn phenylketonuria (PKU) Guthrie (BIA) screening and early hospital discharge. *Early Human Devel.* 1997; 47:87-96.
- 1.2 Juurlink DN, Borczyk A, Simor AE. Native valve endocarditis due to *Corynebacterium striatum*. *Eur. J. Clin. Microbiol Infect Dis* (in press).
- 1.3 Ellis A, Preston M, Borczyk A, Miller B, Stone P, Hatton B, Chagla A, Hockin J. A community outbreak of *Salmonella berta* associated with a soft cheese product. *Epidemiol. Infect.* (in press)
- 1.4 Bielaszewska M, Janda J, Blahova K, Minarikova H, Jilkova E, Karmali MA, Laubova J, Sikulova J, Bencik J, Preston MA, Khakhria R, Karch H, Klazarova H, Nyc O. Human *Escherichia coli* O157:H7 infection associated with the consumption of unpasteurized goat milk. *Epidemiol Infect.* (in press)
- 1.5 Harnett N, Lin Y P, Krishnan C. Detection of pathogenic *Yersinia enterocolitica* using the multiplex polymerase chain reaction. *Epidem Infect* 1996;117:59-67.
- 1.6. Harnett N, Mangan L, Brown S, Krishnan C. Thermosensitive transfer of antimicrobial resistances and citrate utilization and cotransfer of hydrogen sulfide production from an *Escherichia coli* isolate. *Diag Microbiol Infect Dis* 1996;24:173-178.
- 1.7 Harnett N, Brown S, Riley G, Terro R, Krishnan C, Pauzé M, Yeung K-H. Analysis of *Neisseria gonorrhoeae* in Ontario, Canada, with decreased susceptibility to quinolones by pulsed field gel electrophoresis, auxotyping, serotyping, and plasmid content. *J Med Microbiol* 1997; 46:1-8.

2. Publications in Non-refereed Journals

- 2.1 Preston M, Borczyk A, McGeer A, Bertoli J, Harris, S, Thususka J, Goldman C, Green K, Low D, Proctor P, Johnson W, Khakhria R,. Hospital outbreak of *Escherichia coli* O157:H7 associated with a rare phage type - Ontario. CCDR 1997; 23-5:33-37.
- 2.2 Weinstein, M, Low D, McGeer A, Willey B, Rose D, Coulter M, Wyper P, Borczyk A, Lovgren M, Facklam R. Invasive infection with *Streptococcus iniae* - Ontario, 1995-1996. MMWR 1996;45:650-653.
- 2.3 Weinstein M, Low D, McGeer A, Willey B, Rose D, Coulter M, Wyper P, Borczyk A, Lovgren M, Facklam R. Invasive infection due to *Streptococcus iniae*: a new or previously unrecognized disease - Ontario, 1995-1996. CCDR 1996; 22-15:129-132.
- 2.4 Preston M, Lo H, Borczyk A. More on the recent emergence of a new strain of MRSA in Ontario. LPTP Newsletter No. 195 January 28, 1997.
- 2.5 Borczyk A, Styliadis S. Pet hedgehogs and Salmonella. Labstracts. Public Health Laboratories of Ontario. February '97 - #8.
- 2.6 Borczyk A, Styliadis S. Pet hedgehogs and Salmonella. PHERO (Feb/Mar '97 in press).

3. Presentations at Scientific Societies Meetings

- 3.1 Srinivasan R, Karmali M, Nelson S, Borczyk A, Alexander S, Pires C. Detection and characterization of serotyped enteropathogenic *Escherichia coli* (EPEC) strains on the basis of virulence genes using PCR. 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ont., November 10-14, 1996.
- 3.2 Preston M, Khakhria R, Borczyk A. Stability of pulsed-field gel electrophoresis patterns and phage types of *Escherichia coli* O157:H7. 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ont., November 10-14, 1996.
- 3.3 Louie L, Misquith G, McGeer A, Davidson R, Bertolin J, Thususka J, Borczyk A, Louis M. Evaluation of PCR, culture and an enzyme immunoassay (EIA) for the detection of *Escherichia coli* O157:H7 in outbreak-associated stool specimens. 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ont., November 10-14, 1996.
- 3.4 Preston M, Khakhria R, Borczyk A. Evaluation of pulsed-field gel electrophoresis for epidemiological typing of *Escherichia coli* O157:H7 strains. 96th General Meeting of the ASM, New Orleans, La., May 19-23, 1996.
- 3.5 Harnett N, Lin Y, Hu G, Borczyk A, Krishnan C. Molecular characterization of Canadian isolates of *Yersinia pseudotuberculosis*. 96th General Meeting of the ASM, New Orleans, La., May 19-23, 1996.
- 3.6 Weinstein M, Low D, McGeer A, Willey B, Rose D, Coulter M, Wyper P, Borczyk A, Lovgren M, Facklam R. Invasive infection due to *Streptococcus iniae*: a new or previously unrecognized disease - Ontario, 1995-1996. 36th Interscience Conference on Antimicrobial Agents and Chemotherapy, New Orleans, La., Sept. 15-18, 1996.
- 3.7 Krajden S, Fuksa M, Rogovein T, Borczyk A, Johnson W, Kempston J, Patterson M, Mailloux L, Hian-Cheong C. Fatal septicemia due to *Vibrio mimicus*. 7th International Congress for Infectious Diseases, Hong Kong, June 10-13, 1996.
- 3.8 Sulakvelidze, A., N. Harnett, G. Hu, C. Krishnan, J.G. Morris. Molecular and phenotypic characterization of selected Canadian *Yersinia bercovieri* (Yb). Presented at the 96th General Meeting of the American Society for Microbiology, New Orleans, Louisiana, 1996.

4. Presentations of Seminars (Scientific/Administrative)

- 4.1 Borczyk A. *Streptococcus iniae*: an emerging invasive human pathogen. Toronto Public Health Laboratory, Feb. 6/97.
- 4.2 Preston, Epidemiologic typing of *Escherichia coli* O157:H7. Toronto Public Health Laboratory, March 6, 1997.

PUBLICATIONS AND PRESENTATIONS

**LABORATORY/SECTION: ENVIRONMENTAL MICROBIOLOGY & MICROBIOLOGICAL
SUPPORT SERVICES**

YEAR: 1996/1997

1. PUBLICATIONS:

1.1 Refereed Journals: None

1.2. Chapter/Book: None

1.3. Non-Refereed Publications:

- 1.3.1 A Guide to the Investigation and Control of *Cryptosporidium* and *Giardia* Waterborne Outbreaks. Outbreak Control Program, by M.H. Brodsky, D. Fraser, C. LeBer. P. Powell and D. Sider. Mandatory Health Programs and Services, Public Health Branch (Pub). Spring 1997.

2. PRESENTATIONS:

2.1 Abstracts and Posters:

- 2.1.1 A poster "Detection of *Cryptosporidium parvum* Oocysts in Municipal Water Samples using the Polymerase Chain Reaction and the Digene SHARP Signal™ System" by E. Chung, A. Yee, S. deGrandis, J. Aldom, A. Chagla, G. Palmateer, S. Unger, P. Boleszczuk, M. Langridge, M. H. Brodsky, J. T. Trevors and H. Lee, was presented at the AWWA Meeting in Boston, Mass.
- 2.1.2 A poster "Detection of *Cryptosporidium parvum* Oocysts in Municipal Water Samples using the Polymerase Chain Reaction and the Digene SHARP Signal™ System Assay" by Edmund. Chung, John Aldom, Abdul Chagla, Gary Palmateer, Shelly Unger, Peyer Boleszczuk, Maryann Langridge, Michael Brodsky, Arlene Yee, Jack Trevors, Hung Lee and Stephanie de Grandis, will be presented at the International Symposium on Waterborne *Cryptosporidium* in Newport Beach, California in March 1997.

- 2.1.3 *DC Medium: A Differential Coliform Medium for Simultaneous Enumeration of Coliforms and Escherichia coli in Water by Membrane Filtration* was submitted for a poster session at the ASM General Meeting in May 1997.

2.2 Presentations at Scientific Meetings:

- 2.2.1 M. Brodsky: 2-day workshop on QA for Microbiological Laboratories prior to the AOAC Annual Meeting.
- 2.2.2 M. Brodsky: "Use of Indicator Organisms as a -Safety Index" at the Fall Dairy Industry Conference in Ontario, California.
- 2.2.3 M. Brodsky: "Everything Old is New Again in Environmental Microbiology" at the Northern Area Educational Conference in Sudbury.
- 2.2.4 M. Brodsky: 2-day workshop on QA for Microbiological Laboratories in Chicago.

2.3 Presentation of Seminars:

- 2.3.1 M. Brodsky: Status of municipal water testing and the impact on the PHLs and Health Units; Revisions to the private citizen "postcard" report; Availability of expertise within the MOH for Cryptosporidium investigations; at the joint TACEM/ASPHIO meeting.
- 2.3.2 B. Ciebin: In-house data for the CEC medium to TACEM in preparation for the collaborative study.

- 2.3.3 B. Ciebin: *Development of a One Step Membrane Filter Method for Detection of E .coli in Water at the Central Public Health Laboratory.*
- 2.3.4 B. Ciebin: Data on the DC (formerly CEC) collaborative study to the TACEM.
- 2.3.5 M. Brodsky: "IAMFES- Beyond the Acronym" at the Fall Dairy Industry Conference in Ontario, California.
- 2.3.6 M. Brodsky: "IAMFES- Beyond the Acronym" at the Annual Meeting of the Ontario Food Protection Association in Toronto.
- 2.3.7 M. Brodsky: "Cryptosporidium and Other Current Public Health Laboratory es", Environmental Health Officers Training Session, Health Canada, Toronto.

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: HIV LABORATORY

YEAR: 1996/1997

Publications:

A Human Immunodeficiency Virus Information Project for Transfusion Recipients, a Decade after the Transfusion. King, S., Murphy, T., Corey, M., Newman, A., Major, C., McCrindle, B., Irwin, J., Stevens, M., Fearon, M., Poon, A. Archives of Pediatric and Adolescent Medicine, 1995, 149: 680-5.

Prevalence of Human Immunodeficiency Virus and Associated Risk Behaviour in Injection Drug Users in Toronto. Millson, M., Myers, T., Rankin, J., McLaughlin, B., Major, C., Mindell, W., Coates, R., Rigby, J., Strathdee, S. (Submitted)

Rapid Screening for the early detection of mother-to-child transmission of HIV-1. Cassol, S., Butcher, A., Kinard, S., Spadaro, J., Sy, T., Lapoint, N., Read, S., Gomez, P., Fauvel, M., Major, C., O'Shaughnessy, M. J. Clin. Micro., 1994, 32;11: 2641-2645.

Quantitative Measures of HIV specific antibodies predict progression to AIDS. Strathdee, S., Frank, J., McLaughlin, B., Leblanc, M., Major, C., O'Shaughnessy, M., Read, S. JID 1995; 172: 1375-9.

Reducing volunteer bias: using left-over specimens to estimate rates of HIV infection among inmates in Ontario, Canada. Calzavara, L., Major, C., Myers, T., Schlossberg, J., Millson, M., Wallace, E., Rankin, J., Fearon, M. AIDS 1995, 9: 631-637.

The Prevalence of HIV-1 Infection Among Inmates in Ontario, Canada. Calzavara, L., Major, C., Myers, T., Schlossberg, J., Millson, M., Wallace, E., Rankin, J., Fearon, M. Canadian Journal of Public Health, 1995, 86; 5: 335-9.

Lack of specificity of HTLV Antibody Enzyme Immunoassays. Jang, D., Mahony, J., Sellors, J., Galli, R., Gregory, B., Chernesky, M. Journal of Acquired Immune Deficiency Syndrome and Human Retrovirology, 1995, 9: 523-524.

Performance Characteristics of Recombinant Enzyme Immunoassay to Detect Antibodies to Human Immunodeficiency Virus Type 1 (HIV-1) and HIV-2 and to Measure early Antibody Responses in Seroconverting Patients. Galli, R., Castriciano, S., Fearon, M., Major, C., Choi, K.W., Mahony, J., Chernesky, M. Journal of Clinical Microbiology, Vol. 34, No. 4, April, 1996, 999-1002.

Abstracts /Posters:

Assessing Representativeness in the HIV Ontario Observational Database - What is Population-Based Research Anyway? Millson, P., Leeb, K., Cameron, B., Major, C., Palmer, R., XI International AIDS Meeting, Vancouver, July, 1996.

Detection of Incident HIV Infection using a Reflex Algorithm of Laboratory Testing Methods. Galli, R., Major, C., Fearon, M., Swantee, C., Francis, A., Gregory, B., XI International AIDS Meeting, Vancouver, July, 1996.

Using Repeat Testers to Estimate HIV Incidence. Calzavara, L., Major, F., Palmer, R., Brown, David C., Galli, R., Fearon, M., XI International AIDS Meeting, Vancouver, July, 1996.

The Establishment of an HIV Oral Fluid Reference Panel for Antibody Test Kit and Saliva collection Device Evaluation. Fearon, M. A., Major, C., Francis, A., Galli, R., DeGazio, T., Read, S., Gomez, P., Parry, J., Bain, R., Fauvel, M. XI International AIDS Meeting, Vancouver, July, 1996.

A Decade of Laboratory-Based HIV Surveillance. Palmer, R.W.H., Major, C., Brown, D., Wallace, E. M., Browne, J., Fearon, M., Archibald, C., Ofner, M. XI International AIDS Meeting, Vancouver, July, 1996.

Women and HIV Testing in Ontario. Major, C., Galli, R., Fearon, M., Palmer, R., Brown, D., Calzavara, L., Ofner, M. XI International AIDS Meeting, Vancouver, July, 1996.

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: MYCOLOGY

YEAR: 1996/1997

Refereed Publications:

Sigler, L., R.C. Summerbell, L. Poole, M. Wieden, D.A. Sutton, M.G. Rinaldi, M. Aguirre, G.W. Estes, and J.N. Galgiani. 1997. Invasive Nattrassia mangiferae infections: case report, literature review, and therapeutic and taxonomic appraisal. J. Clin. Microbiol. 35: 433-440.

Tarlo, S.M., Y. Wai, J. Dolovich, and R.C. Summerbell. 1996. Occupational asthma induced by Chrysionilia sitophila in the logging industry. J. Allergy Clin. Immunol. 97: 1409-1413.

Summerbell, R.C., A. Li, and R. Haugland. 1996. The changing spectrum of dermatophyte species. In Culture collections to improve the quality of life. Edited by R.A. Samson, J.A. Stalpers, D. van der Mei, and A.H. Stouthamer. Centraalbureau voor Schimmelcultures, Baarn, Netherlands, pp. 383-386.

Presentations and workshops at international and Canadian meetings.

The changing spectrum of dermatophyte species. Summerbell, R.C., A. Li, and R. Haugland. Presented at International Culture Collection Congress 8, Veldhoven, Netherlands, Aug. 25-29, 1996.

Sequence deletion in the 5.8S ribosomal RNA genes and the internal transcribed spacer (ITS) regions of Candida lusitaniae. Li, A. and R.C. Summerbell. Presented at the Conjoint Meeting on Infectious Diseases, Hamilton, Ont. Nov. 10-14, 1996.

Species concepts in the anthropophilic dermatophytes. Summerbell, R.C. Presented at the American Society for Microbiology annual meeting, New Orleans, May 19-23, 1996.

Workshop: Keys to success in medical mycology. Summerbell, R.C. and G. St.-Germain, co-sponsored by Texas Dept. of Health and the National Laboratory Training network, New Orleans, May 16-17, 1996.

Epidemiology and ecology of onychomycosis. Summerbell, R.C. Presented at Clinical dermatology 2000, Vancouver, 28 May 1996.

PRESENTATIONS AND PUBLICATIONS

LABORATORY/SECTION: SEROLOGY

YEAR: 1996/1997

1. PUBLICATIONS IN REFEREED JOURNALS

R.H. Notenboom. "Syphilis: Today's Tests". The Canadian Journal of DIAGNOSIS, May 1996, pp.105-119.

E.L. Ford-Jones, I. Kitai, M. Corey, R. Notenboom, N. Hollander, E. Kelly, H. Akoury, G. Ryan, I. Kyle, R. Gold. "Seroprevalence of toxoplasma antibody in a Toronto population". Can.J.Infect.Dis. Vol.7, No.5 September/October, 1996.

2. ABSTRACTS/POSTERS

R.H. Notenboom and G. Chen See "Recombinant treponemal antigens: application in a treponemal screen test for syphilis". 96th ASM General Meeting, New Orleans, May 19-23rd, 1996.

C.Y. Lo and R.H. Notenboom "Specificity of EIA for the detection of Borrelial antibodies in areas of low endemicity". 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ontario, November 10-14th, 1996.

C.Y. Lo and R.H. Notenboom "Diagnostic sensitivity of IgG Western Blot bands for Lyme Disease". 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ontario, November 10-14th, 1996.

C.Y. Lo, R.H. Notenboom and G. Chen See "Rapid, semi-automatic EIA for antibodies to recombinant treponemal antigens". 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ontario, November 10-14th, 1996.

R. Berry, N. denHollander and R.H. Notenboom "Comparison of treponemal antibody agglutination tests". 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ontario, November 10-14th, 1996.

Z. Pikula, N. denHollander and R.H. Notenboom "Evaluation of H. pylori serology". 64th Conjoint Meeting on Infectious Diseases, Hamilton, Ontario, November 10-14th, 1996.

3. PRESENTATIONS IN NON-REFEREED JOURNALS

Nil

4. PRESENTATION OF SEMINARS

Dr. Notenboom:

"New Methods in the Serodiagnosis of Syphilis". Moscow, Russia, August 27, 1996.

"Developments in the Serodiagnosis of Syphilis". Vilnius, Lithuania, August 28, 1996.

"Syphilis Serodiagnosis and Interpretations". Seminar for STD staff, Scarborough Health Unit, October 8, 1996.

"Congenital Syphilis" Grand Rounds with Dr. Laura McGee, Mt. Sinai Hospital, November 26, 1996.

OTHER

"Recent Histoplasmosis Outbreaks in Ontario". C.M. Smitka
www.gov.on.ca/health, November 1996 (submitted).

"Ehrlichiosis - Is it going undetected in Ontario Citizens?"
Labstract, November 1996 - #2

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: VIROLOGY

YEAR: 1996/97

1. Publication(s) in Refereed Journals:
(These are peer reviewed journals e.g. J. Clin Micro, Can J. Inf Dis, Can J. Micro, etc.)

Type of Publications:

Research papers, scientific articles, notes, reviews etc.

Paul N. Levett, Marie Gu, Bo Luan, Margaret Fearon, Joan Stubberfield, Frances Jamieson and Martin Petric. Longitudinal Study of Molecular Epidemiology of Small Round-Structured Viruses in a Pediatric Population. (Journal of Clinical Microbiology, June 1996, p. 1497-1501)

Richard A. Galli, Santina Castriciano, Margaret Fearon, Carol Major, Kam Wing Choi, Jim Mahony, Max Chernesky. Performance Characteristics of Recombinant Enzyme Immunoassay to Detect Antibodies to Human Immunodeficiency Virus Type 1 (HIV-1) and HIV-2 and to Measure Early Antibody Responses in Seroconverting Patients. (Journal of Clinical Microbiology, April 1996, p. 999-1002)

2. Publications of Chapter/Book:

NIL

3. Publication(s) in non-refereed Journals:
These are "Not peer reviewed" journals and newsletters e.g.: PHLO, CBR, CDWR, BioFeed Back, MMWR.

Type of Publications:

Scientific/Non-Scientific articles, notes, Technical correspondence, epidemiological summaries, etc.

Influenza Update - January 6/97 - Labstract

4. Abstracts/Posters:

(Prepared for scientific associations meetings, open house demonstrations, technical and ministerial meetings, etc.)

Low Avidity IgG Antibody Directed Against Viral Capsid Antigen (VCA) in Determining the Diagnosis of Epstein Barr Virus (EBV) Infections. P. George, E. Cheung, M. Fearon, J. Gheewala, S. Nagra, Ontario Ministry of Health, Laboratory Services Branch, Ontario, Canada.

Is Viral Load a Predictor of Clinical Outcome? S. Read⁵, C. Major¹, X. Li⁵, G. Strunc¹, R. Galli¹, M. Fearon¹, M. Fisher⁵, R. Palmer³, S. Strathdee⁴, L. Calzavara², A. Peter³, A. Rachlis³, ¹HIV Laboratory, Ontario Ministry of Health, ²University of Toronto, ³Sunnybrook Health Science Centre, ⁴BC Centre for Excellence in HIV, ⁵Hospital for Sick Children, Toronto.

Women and HIV Testing in Ontario. C. Major¹, R. Galli¹, M. Fearon¹, R. Palmer², D. Brown¹, L. Calzavara³, M. Ofner⁴, ¹HIV Laboratory, Ontario Ministry of Health, Toronto, Canada, ²HIV Project Centre, Sunnybrook Health Sciences Centre, ³HIV Studies Unit, University of Toronto, ⁴Laboratory Centre for Disease Control.

A Decade of Laboratory-Based HIV Surveillance. R.W.H. Palmer⁴, C. Major¹, D. Brown¹, E. M. Wallace¹, J. Browne³, M. Fearon¹, C. Archibald⁵, M. Ofner⁵, ¹HIV Laboratory, ²Public Health Branch, ³AIDS Bureau, Ontario Ministry of Health, ⁴Sunnybrook Health Sciences Centre, ⁵Laboratory Centre for Disease Control, Ontario, Canada.

The Establishment of an HIV Oral Fluid Reference Panel for Antibody Test Kit and Saliva Collection Device Evaluation. M. A. Fearon¹, C. Major¹, A. Francis¹, R. Galli¹, T. DeGazio², S. Read², P. Gomez³, J. Parry⁴, R. Bain³, M. Fauvel⁵, ¹HIV Laboratory, Ontario Ministry of Health, ²Hospital for Sick Children, Toronto, Canada, ³Princess Margaret Hospital, Bahamas, ⁴Central Public Health Laboratories, London, UK, ⁵Laboratoire de Sante Publique Montreal, Canada.

Detection of Incident HIV Infection Using a Reflex Algorithm of Laboratory Testing Methods. Richard A. Galli, C. Major, M. Fearon, C. Swantee, A. Francis, B. Gregory, HIV Laboratory, Public Health Laboratory Services, Ontario Ministry of Health, Toronto, Canada.

Chronic Hepatitis C Infection in Pediatric Patients Transfused Between 1986-1990 in Toronto. E. A. Roberts¹, N. J. McGee¹, S. M. King¹, M. Fearon², ¹Department of Paediatrics The Hospital for Sick Children and University of Toronto, ²Laboratory Services Branch, Ontario Ministry of Health, Toronto, Canada.

Administration of Hepatitis B Vaccine can Interfere with Subsequent Tests for Hepatitis Bs Antigen. D. A. Cook¹, M. Fearon², L. Wilton¹, K. Nicholas². Provincial Laboratory¹, Vancouver and Central Public Health Laboratory², Toronto.

Assessment of the Ontario Hepatitis B Prenatal Screening Programme. S. Wasfy¹, M. Fearon¹, E. Wallace², H. Bangura². ¹Laboratory Services Branch, Ontario Ministry of Health, ²Public Health Branch, Ontario Ministry of Health, Toronto, Ontario.

Evaluation of LCX (Abbott) and Amplicor PCR (Roche) for the Detection of Chlamydia Trachomatis. R. Thorup¹, F. R. Bishai², K. Rohoman¹, A. Chiodo³, and M. Fearon¹. ¹Laboratory Services Branch, Ministry of Health, Toronto, Ontario, ²FRB Consultants, Mississauga, Ontario, ³Alpha Laboratories, Toronto, Ontario.

Molecular Epidemiology of Small-Round Structured Viruses in Ontario. M. Petric¹, R. Yeung¹, B. Luan¹, M. Gu¹, M. Fearon², J. Stubberfield², A. Simor³. Hospital for Sick Children¹, Central Public Health Laboratory², Sunnybrook Hospital³, Toronto, Ontario, Canada.

Using Repeat Testers to Estimate HIV Incidence. David Brown¹, Robert Palmer², Rick Galli¹, Margaret Fearon¹, Carol Major¹, Liviana Calzavara³. ¹HIV Laboratory, Public Health Laboratory Services, ²HIV Project Centre, Sunnybrook Health Sciences Centre, ³HIV Studies Unit, University of Toronto, Ontario.

Multisite Evaluation of Three Commercial Methods for the Quantitation of HIV -1 Plasma RNA in Clinical Specimens. Galli, R.¹, Krajden, M.², Read, S.³, Major, C.¹, Grigoriev A.², Li, X.³, Strunc, G.¹, Swantee, C.¹, Gregory, B.¹, Cork, L.², denHollander, C.³, DeGazio, T.¹, Fearon, M.¹. ¹HIV Laboratory, Ontario Ministry of Health; ²Toronto Medical Laboratory,

Toronto Hospital; ³Hospital for Sick Children, Toronto, Canada.

Evaluation of Royce Biomedical Rapid-Flo HIV 1/2 Antibody Screening Test. T. Mazzulli, R. Chua, G. Moussa, S. Wood, S. Walmsley, M. Skulnick, R. Galli, and M. Fearon. Mount Sinai & Princess Margaret Hospitals, Ontario Public Health Laboratory, & University of Toronto, Toronto, Canada.

An Outbreak of Hepatitis B Associated with EEG Clinics in Toronto. M. Fearon, I. Johnson, K. Nicholas, J. Carlson, R. Chaudhary, A. Andonov, S. Tyler, J. Hockins. Ontario Ministry of Health, North York Health Department, Toronto, Laboratory Centre for Disease Control, Ottawa, Ontario, Canada.

5. Presentation of Scientific Societies meetings:
(e.g. ASM, ASCP, CACMID, CSM, IAMFES, etc.)

NIL

6. Presentation of seminars (scientific/administrative):
(e.g. ALC, In-house training, advisory committee, directors/head tech. meetings, etc.)

- 6.1 Pharmacy Students Microbiology Course, University of Toronto
 - Viral Pathogenesis/Host Response - Jan. 11/96
 - Viral Infections of the Respiratory Tract - Jan. 18/96
 - Viral Infections of the G.I. Tract - Feb. 15/96
 - Vaccines/Immunoprophylaxis - March 7/96
- 6.2 What's New in HIV Testing,
Thunder Bay Regional Laboratory - Sept. 19/96
- 6.3 Level 4 Laboratories: Into the Lion's Den,
OSMT Annual Convention, Toronto - Oct. 2/96
- 6.4 Pharmacy Students Microbiology Course, University of Toronto as
above Jan. 9, 16, 28, and March 4/97
- 6.5 Laboratory Workers & HIV: Are You at Risk,
Telemedicine - April 1/97
- 6.6 Laboratory Testing in Virology, Continuing Education,
OSMT, Wingham & District Hospital - April 9/97
- 6.7 Introductory Seminar for Public Health Inspectors on the "Guide
for Respiratory Outbreaks".
- 6.8 Teleconferences with Regional Laboratories - Hepatitis Training
Upgrades, i.e. Preparation for PCR and Anti-HBs Testing.

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: HAMILTON

YEAR: 1996/1997

4. Abstracts/Posters

Jeakins 1996. Bacteriological Testing of Drinking Waters. Mississaugas of the New Credit First Nation. Community Health Fair. Hagersville, September 26.

Jackson, S.G. 1996. Diagnostic Implications of Elevated *Clostridium perfringens* Faecal Spore Levels in Elderly Institutionalized Individuals. CACMID Poster Session. Hamilton, November 12.

Presentations at Scientific Societies Meetings

Bielec, L., T. Boisvert, and S.G. Jackson 1996. Investigation of a Wading Pool-linked *Cryptosporidium* Outbreak. CACMID, Hamilton, November 13.

6. Presentation of Seminars:

Boisvert, T. and V. Odorico. 1996. Public Health Laboratory Testing. Presentation and tour for Career Canada Students and teacher.

-Jackson, S. G. and L. Bielec. 1996. *Giardia* and *Cryptosporidium* research at the Hamilton Public Health Laboratory. Meeting of the Technical Advisory Committee on Environmental Microbiology, Central Public Health Laboratory, May 10. (Invited speakers)

Boisvert, T. And V. Odorico. 1996. Public Health Laboratory Testing. Presentation and tour for Mohawk College Students and teacher.

Boisvert, T., Jackson, S., and V. Odorico. 1996. "What's New at the Hamilton Public Health Laboratory?" And "Laboratory Investigation of Outbreaks". Information Sessions on changes in Public Health Laboratory Testing and outbreak management for Halton Health Unit - December 2; Niagara Health Unit - December 3; Haldimand -Norfolk and Hamilton - Wentworth Health Units - December 4 at the Hamilton PHL.

Jenkins, M. 1996. Report on the **GOALS** Conference. In - house seminar. December 29.

Jackson, S. 1997. Introduction to Medical Microbiology, BScN Unit III, 2B08 McMaster University. January 13.

Boisvert, T. 1997. Introduction to Medical Microbiology BScN 2B08 Laboratories. McMaster University, January 13 and 27.

Jackson, S. 1997. Soil, Food, and Water Microorganisms. Medical Microbiology BScN 2B08, McMaster University. January 20.

PRESENTATIONS AND PUBLICATIONS

LABORATORY/SECTION: Orillia

YEAR: 1996/97

-
1. Richardson, H., C. A. Fleming, J. Palmer, E. Chen, R. Lannigan and the Microbiology Committee. 1996. An assessment of the utilization of diagnostic parasitology laboratory services in Ontario. Can. J. Infect. Dis. 7: 237 - 241.

Richardson, H., C. A. Fleming, A. M. R. MacKenzie and the Microbiology Committee. 1996. Diversity of urine bacteriology practice in Ontario: an external quality assessment. Can. J. Infect. Dis. 7: 243 - 246.

Richardson, H., D. E. Wood, J. Whitby, R. Lannigan, C. A. Fleming and the Microbiology Committee. 1996. Quality improvement of diagnostic microbiology through a peer - group proficiency assessment program - a twenty - year experience in Ontario. Arch. Pathol. Lab. Med. 120: 445 - 455.

4. ASM Posters

MacKenzie, A. M. R., D. S. Thompson, C. A. Fleming, H. Richardson and the Microbiology Committee. 1997. Patterns of practice with sputa in Ontario Laboratories - an external quality assessment.

Fleming, C. A., H. Richardson, R. Lannigan and the Microbiology Committee. 1997. Antimicrobial susceptibility of *Enterococcus faecalis* - discordant findings in proficiency testing in Ontario.

CPHA Poster

D. S. Thompson, Chiefs of Service and Regional Laboratory Directors, Public Health Laboratories, Ontario Ministry of Health. 1997. The comprehensive laboratory investigation of enteric disease outbreaks. Canadian Public Health Association Second National Conference on communicable Disease Control, Toronto. April 9 - 11, 1997.

5. CACMID Presentations

Fleming, C. A., D. E. Low, H. Richardson and the Microbiology Committee. External assessment of laboratory practice with throat swabs in Ontario. Annual Meeting of the Canadian Association for Clinical and Infectious Diseases (CACMID), Hamilton, ON. November 10 - 14/96.

6. North Bay and District Health Unit seminar "Communicable Disease Outbreak Management in Institutional Settings" - presentation "Public Health Laboratory Role in a Declared Outbreak" by Donna Thompson, October 23, 1996.

In Service North Bay and District Health Unit - outbreak summary, universal data sheet, vancomycin resistant enterococci (VRE), methicillin resistant staphylococci (MRSA), HIV viral load, Influenza A, by Donna Thompson, October 22, 1996.

Rounds "Antibiotic Choices for Urinary Tract Infections - some sanity in a world of emerging antibiotic resistance" at Orillia Soldiers' Memorial Hospital, by Donna Thompson, December 6, 1996.

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: OTTAWA

YEAR: 1996/1997

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1. Publication(s) in Referred Journals:
(These are peer reviewed journals e.g., J. Clin Micro, Can J. inf dis, Can J. Micro, etc:)

Type of Publications:

Research papers, scientific articles, notes, reviews, etc.

Chou S, Chedore P, Haddad A, Paul NR, and Kasatiya S. 1996. Direct Identification of Mycobacterium species in Bactec 7H12B Medium by Gas-Liquid Chromatography. J. Clin. Microbiol. 34:1317-1320.

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: PALMERSTON

YEAR: 1996/1997

1. Publication(s) in Referred Journals:
(These are peer reviewed journals eg. J. Clin Micro, Can J. Inf Dis, Can J. Micro, etc.)

Type of Publications:

Research papers, scientific articles, notes, reviews etc.

NONE

2. Publications of Chapter/Book:

NONE

3. Publication(s) in non-referred Journals:
These are "Not peer reviewed" journals and newsletters
eg: PHLO, CBR, BioFeed Back, MMWR.

Type of Publications:

Scientific/Non-Scientific articles, notes, Technical correspondence, epidemiological summaries, etc.

NONE

4. Abstracts/Posters:
(Prepared for scientific associations meetings, open house demonstrations, technical & ministerial meetings, etc.)

NONE

5. Presentation at Scientific Societies meetings:
(eg: ASM, ASCP, CACMID, CSM, IAMFES, etc.)

NONE

6. Presentation of Seminars (Scientific/Administrative):
(eg: ALC, In-House training, Advisory committee, Directors/Head Tech. meetings, etc.)

Presentations/Seminars

May '96 Half day seminar for four medical technology students training at Stratford General Hospital. Chlamydia testing, Syphilis and Rubella serology and Parasitology were discussed and demonstrated. Students had a little "hands on" experience in parasitology.

PRESENTATIONS AND PUBLICATIONSLABORATORY/SECTION: **Peterborough**YEAR: 1996/1997

1. Publication in Refereed Journals

Nil

2. Publications of Chapter/Book

Nil

3. Publication in non-refereed Journals

Nil

4. Abstracts/Posters

Nil

5. Presentations at Scientific Societies Meetings

Nil

6. Presentation of Seminars (Scientific/Administrative)

Nil

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: SAULT STE. MARIE

YEAR: 1996/1997

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1. Publications in Referred Journals. None
 2. Publications of Chapter/Book: None
 3. Publication(s) in non-refereed Journals: None
 4. Abstracts/Posters: None
 5. Presentations at Scientific Societies meetings: None
 6. Presentations at Seminars (Scientific/Administrative):
 1. J.H. Jessop, June, 1996. "Detection of Cryptosporidium species in Water" presentation to members of the Inter-Agency Infection Control Committee.
 2. J.H. Jessop, July, 1996. "Water Bacteriology Testing" presentation including showing of video, lab demonstration and lab tour to Ministry of Environment & Energy Environmental Youth Corps students.
 3. J.H. Jessop, January 1997. As above, to students of Sault College of Applied Arts & Technology.
 4. J.H. Jessop, January 1997. "DASH" Presentation on LSB's new requisition, Specimen Collection Kits & Transportation Bags to Group Health Centre outpatient clinic staff.
 5. J.H. Jessop, January 1997. As above (3 times), to staff of Sault Area Hospitals and doctors' office staff.
 6. J.H. Jessop, February 1997. As above, to staff of Algoma Health Unit from Sault Ste. Marie, Blind River, Elliot Lake and Wawa.
 7. J.H. Jessop, February 1997. As above, to members of Inter-Agency Infection Control Committee.
 8. J.H. Jessop, February 1997. Presentation on "Role of Algoma District Laboratory Network Committee" at Mayor's Municipal Healthcare Forum.
 9. J.H. Jessop, February 1997. Presentation on "HIV Postexposure Prophylaxis" to members of Inter-Agency Infection Control Committee.
 10. J.H. Jessop, February 1997. As above, to members of Sault Area Hospitals Infection Control Committee.

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: THUNDER BAY

YEAR: 1996/1997

1. Publication(s) in Refereed Journals:
Nil
2. Publications of Chapter/Book:
Nil
3. Publication(s) in non-refereed Journals:
Nil
4. Abstracts/Posters:
Nil
5. Presentations at Scientific Societies meetings, etc.:
Nil
6. Presentation of Seminars (Scientific/Administrative):
Nil

PUBLICATIONS & PRESENTATIONS

LABORATORY/SECTION: **TIMMINS**YEAR: 1996-97

PRESENTATIONS:

22 May 96-- Presentation to Nurses at Timmins and District Hospital on
" Collection of Specimen and Interpretation of Results".

20 February 97-- Presentation to College Boreal in Sudbury on
"Sexually Transmitted Diseases"

PUBLICATIONS:

Nil

PUBLICATIONS AND PRESENTATIONS

LABORATORY/SECTION: Windsor

YEAR: 1996/97

1. Publication(s) in Refereed Journals:
(These are peer reviewed journals e.g. J. Clin Micro, Can J. Inf Dis, Can J. Micro, etc.)

Type of Publications:

Research papers, scientific articles, notes, reviews etc.

NIL

2. Publications of Chapter/Book:

NIL

3. Publication(s) in non-refereed Journals:
These are "Not peer reviewed" journals and newsletters e.g.: PHLO, CBR, CDWR, BioFeed Back, MMWR.

Type of Publications:

Scientific/Non-Scientific articles, notes, Technical correspondence, epidemiological summaries, etc.

NIL

4. Abstracts/Posters:
(Prepared for scientific associations meetings, open house demonstrations, technical and ministerial meetings, etc.)

NIL

5. Presentations at Scientific Societies meetings:
(eg: ASM, ASCP, CACMID, CSM, IAMFES, etc.)

NIL

6. Presentation of Seminars (Scientific/Administrative):
(eg: ALC, In-House training, Advisory committee, Directors/Head Tech. meetings, etc.)

In-house training - Teleconferences for Laboratory Staff:

16 April 1996

"Invasive Group A Streptococcal Infections"

28 May 1996

"The Transformation of the Laboratory - Discontinuous Change for the 90s"

26 Nov. 1996

"The Dermatophytes"

27 Nov. 1996

"The Evolving Role of Helicobacter pylori in Gastric Disease"

4 Dec. 1996

"Difficult Problems in Infectious Disease Serology"

13 Feb. 1997

CMLTO Quality Assurance Program Information Session

Video Presentations for Laboratory Staff

17 Oct. 1996

CBC TV - "The Health Show" Topic: Chemoprophylaxis After Occupational Exposure to HIV

22 Jan. 1997

"Carryover and Contamination: Causes, Consequences and Cures"

26 Feb. 1997

"Biotechnology Applications: Microbiology and Virology"

5 March 1997

"STDs: Old Topics New Approaches" - Tape I

12 March 1997

"STDs: Old Topics New Approaches" - Tape II
(scheduled)

26 March 1997

"STDs: Old Topics New Approaches" - Tape III
(scheduled)

Presentations to Laboratory Staff:

24 July 1996

Enzyme Immunoassay Test for Determination of *Clostridium difficile*

26 Sept. 1996

Slides (104) on Viral Hepatitis (courtesy of Abbott Laboratories)

Presentations to Clients

5 Dec. 1996

Information session on new specimen collection kits to representatives from area hospitals, private labs and health units.

13 Dec. 1996

Information session on new specimen collection kits to representatives from area hospitals, private labs and health units.

14 Nov. 1996

Presentation by Monica Murphy, Senior Technologist, at Toronto PHL on the *Chlamydia pneumoniae* outbreak in the Windsor area Fall of 1994.

CONFIDENCE BUILDING MEASURE D**Active Promotion of Contacts****Planned international conferences, symposia, seminars, and other similar fora for exchange**

For each such event, the following information should be provided:

Name of the conference, etc.	Canadian Veterinary Medical Association
Arranging organization(s), etc.	Canadian Veterinary Medical Association
Time	July 9-12, 1997
Place	Saskatoon, Saskatchewan
Main subject(s) for the conferences, etc.	Veterinary Medicine
Conditions for participation	Open
Point of contact for further information, registration, etc.	Canadian Veterinary Medical Association 339 Booth Street Ottawa, Ontario K1R 7K1 Tel.: (613) 236-1162 Fax.: (613) 236-9681

CONFIDENCE BUILDING MEASURE D

Active Promotion of ContactsPlanned international conferences, symposia, seminars, and other similar fora for exchange

For each such event, the following information should be provided:

Name of the conference, etc.	American Society for Virology
Arranging organization(s), etc.	Faculty of Science University of Western Ontario
Time	July 19-23, 1997
Place	Bozeman, Montana, USA
Main subject(s) for the conferences, etc.	Virology
Conditions for participation	Open
Point of contact for further information, registration, etc.	Dr. Mark Young Department of Plant Pathology Montana State University 47907-1392 USA Tel.: (406) 994-5158 Fax.: (406) 994-1848

CONFIDENCE BUILDING MEASURE D

Active Promotion of ContactsPlanned international conferences, symposia, seminars, and other similar fora for exchange

Name of the conference etc.	Canadian Society Microbiologists (CSM) Annual Meeting
Arranging organization(s), etc.	Canadian Society Microbiologists
Time	June 15-19, 1997
Place	Laval, Québec
Main subject(s) for the conference, etc.	Clinical Microbiology
Conditions for participation	Open
Point of contact for further information, registration, etc.	Dr. M. Oeullette Dept. of Microbiology School of Medicine Laval University Laval, Québec G1K 7P4, Canada Tel.: (418) 654-2705 Fax.: (418) 654-2715

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts

Planned international conferences, symposia, seminars, and other similar fora for exchange

Name of the conference etc.	Conjoint Meeting on Infectious Diseases
Arranging organization(s), etc.	Canadian Association for Clinical Microbiology and Infectious Diseases
Time	October 26-30, 1997
Place	St. John's, Newfoundland
Main subject(s) for the conference, etc.	Clinical Microbiology
Conditions for participation	Open
Point of contact for further information, registration, etc.	Dr. Martin Skulnick Microbiology Department Mount Sinai Hospital 600 University Avenue Toronto, Ontario M5G 1X5 Tel.: (416) 586-4696 Fax.: (416) 586-8746

CONFIDENCE BUILDING MEASURE E

Declaration of Legislation, Regulations and Other Measures

<u>Relation to</u>	<u>Legislation</u>	<u>Regulations</u>	<u>Other Measures</u>	<u>Amended Since Last Year</u>
a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I.	YES *1	YES	YES	NO
b) Exports of microorganisms* and toxins.	YES	YES	YES	NO
c) Imports of microorganisms* and toxins.	YES	YES	YES	NO

* Microorganisms pathogenic to man, animals and plants in accordance with the Convention.

*1 Such distinctions do not appear in existing Canadian Legislation. However, some aspects would be captured by legislation, depending on the circumstances. Canadian legislation is under review.

CONFIDENCE BUILDING MEASURE F**Declaration of Past Activities in Offensive and/or
Defensive Biological Research and Development Programs**

No change since last year. Last year's report is reproduced here.

1. Date of Entry into Force - 26 March 1975 (Deposit 18 September 1972)

2. Past offensive biological R&D programs:

a. Yes b. 1 Jan 46 to 31 Dec 56

c. In the above period offensive work undertaken by Canada included: studies of improved procedures for production of certain toxins (eg. botulinum and diphtheria); studies on the use of insects as vectors for pathogenic bacteria; test and evaluation of munitions, including performance in cold weather; studies of weapon-produced aerosols of potential BW agents; fundamental work related to field trials, dealing with the dispersion and properties of solid particulates, preparation of finely divided solids for munitions charging and sampling of toxic particulates; development of tissue culture processes for large scale cultivation of viruses; and development of *M. mallei* and *M.l pseudomallei* as new potential BW agents. There was no large scale production, stockpiling or weaponization of BW agents, and no work was aimed at determining the suitability of specific agents as weapons. When necessary, BW agents were destroyed by autoclaving.

3. Past defensive biological R&D programs:

a. Yes b. 1 Jan 46 to present

c. A key factor in biological defence work is that it is only through a thorough understanding of the properties and behaviour of potential BW agents that the potential threat can be appreciated, and work on suitable defensive measures can be undertaken. Accordingly, in the past there was much basic research on such agents, as well as studies of their characteristics and behaviour as aerosols. The aerosol work included studies to delineate the factors, such as those responsible for the death of airborne bacteria and viruses, that affect long distance travel of aerosols. The aim was to better understand the feasibility of large scale use of BW agents. Medical work in biological defence has covered research and development, and in some cases production of toxoids, antitoxins and vaccines for various potential BW agents including botulinum toxin, rinderpest virus, Newcastle Disease virus, *M. mallei*, *F. tularensis* and diphtheria toxin. More recent work in biological defence is summarized in Form A, part 2.

CONFIDENCE BUILDING MEASURE G**Declaration of Vaccine Production Facilities**

1.Name of Facility: IAF BioVac Inc.

2.Location
(mailing address): 525 boul. des Prairies
P.O. Box 70
Laval (Québec) H7N 4Z2

3.General Description of the Types of Diseases Covered:

List of Products manufactured and distributed:

- Adsorbed d₂T_s toxoids against diphtheria and tetanus
- Adsorbed tetanus toxoids against tetanus
- BCG vaccine against tuberculosis
- therapeutic against bladder cancer (BCG)
- Influenza vaccines (split and whole virion) against flu

List of products distributed:

- measles vaccine
- rubella vaccine

CONFIDENCE BUILDING MEASURE G (cont'd)**Declaration of Vaccine Production Facilities**

1. Name of Facility: Connaught Laboratories Ltd.

2. Location
(mailing address): Connaught Laboratories Ltd.
1755 Steeles Ave. W.
North York, Ontario
M2R 3T4

3. General description of the types of diseases covered:

BACTERIAL VACCINES*:

- DPT Adsorbed
- DT Adsorbed
- TD Adsorbed
- Tetanus Toxoid Adsorbed
- Tetanus Toxoid
- Pertussis Vaccine
- Diphtheria Toxoid
- Cholera Vaccine
- BCG Vaccine
- Diphtheria Antitoxin
- Botulism Antitoxin Trivalent Types A, B, and E
- Botulism Antitoxin Type E (Equine)
- DPT Adsorbed combined with Haemophilus b Polysaccharide Vaccine

VIRAL VACCINES*:

- Salk Polio (IPV) and Combinations
- Sabin Polio Vaccine (Oral)
- Measles Vaccine, Live, Attenuated
- Rubella Virus Vaccine, Live, Attenuated
- Rabies Vaccine, Inactivated, (Diploid Cell Origin)

*Does not include products manufactured by foreign affiliates and imported for distribution in Canada.

(i.e. Haemophilus b polysaccharide and meningococcal polysaccharide vaccines; influenza, yellow fever Japanese encephalitis viral vaccines).

CHILE

(April 1997)

**ANEXO DE LA DECLARACION FINAL SOBRE MEDIDAS
DE FOMENTO DE LA CONFIANZA**

En la Tercera Conferencia de Examen se convino en que todos los Estados Partes presentarán la siguiente declaración:

1. **Formulario de declaración sobre "nada que declarar" o "nada nuevo que declarar"**

<u>Medida</u>	<u>Nada que declarar</u>	<u>Nada nuevo que declarar</u>
A, parte 1	()	()
A, parte 2 i)	()	()
A, parte 2 ii)	(X)	()
A, parte 2 iii)	(X)	()
B i)	()	()
B ii)	(X)	()
C	()	()
D	()	()
E	()	()
F	(X)	()
G	()	()

(Márquense el o los casilleros apropiados con respecto a cada medida).

Fecha Al 31 de Diciembre de 1996

Estado Parte en la Convención REPUBLICA DE CHILE

2. **Medida de fomento de la confianza "A"**

Parte 1: Intercambio de datos sobre centros y laboratorios de investigación.

En la Tercera Conferencia de Examen se convino en que los Estados Partes siguieran aplicando la siguiente medida:

"Intercambio de datos, incluidos el nombre, la ubicación, el ámbito y la descripción general de las actividades, respecto de los laboratorios y centros de investigación que satisfacen normas nacionales o internacionales de seguridad muy estrictas establecidas para la manipulación, con fines permitidos, de materiales biológicos que plantean un alto riesgo individual y comunitario o se especializan en actividades biológicas permitidas que están directamente relacionadas con la Convención.

Modalidades

La Tercera Conferencia de Examen convino en que los Estados Partes debían proporcionar datos sobre todas las instalaciones que, estando situadas dentro de su territorio o sometidas a su jurisdicción o control en cualquier lugar, tuviesen laboratorios de contención máxima que reuniesen los criterios que para tales instalaciones se especifican en el Manual de Bioseguridad en el Laboratorio publicado por la OMS en 1983, como, por ejemplo, los que se consideran de nivel de bioseguridad 4 (BL4) o P4, o de niveles equivalentes.

NOTA:

Definido un Laboratorio de Contención Máxima, como aquel que a lo menos cumple con:

- acceso controlado
- sistema de aire controlado
- sistema de descontaminación de efluentes
- esterilización de desechos y materiales
- espacio de contención primaria, y
- airlock para entrada de materiales y especímenes

Por la inexistencia de este tipo de instalaciones, llegándose sólo a BL2; de acuerdo a los criterios internacionales, se tendría que declarar al Instituto de Salud Pública de Chile (ISP.) en situación de:

NADA QUE DECLARAR

Sin embargo, como anexo resulta pertinente completar los datos solicitados para el formulario A Parte I.

FORMULARIO A, Parte 1**Intercambio de datos sobre centros y laboratorios
de investigación 1/**

1. Nombre(s) de la instalación 2/ Laboratorio de Salud, con secciones de:
- Microbiología clínica
- Bacteriología general
- Serología de sífilis
- Microbacterias
- Virología
- Parasitología
- Inmunodiagnóstico
2. Organización o empresa pública o privada responsable Instituto de Salud Pública de Chile (ISP.)
3. Ubicación y dirección postal Avda. Marathon N° 1.000
NUNOA - SANTIAGO
CHILE
4. Fuente(s) de financiación de la actividad, con indicación de si está total o parcialmente financiada por el Ministerio de Defensa.
- Presupuesto asignado por el Ministerio de Hacienda
- Ingresos propios, por acciones que determina el Reglamento
- No tiene financiamiento por parte del Ministerio de Defensa, en funciones de control biológico.
5. Número de unidades de contención máxima 3/ que hay en el laboratorio y/o centro de investigación, con indicación de su tamaño respectivo (m2)
- No existen
6. Si no existe ninguna unidad de contención máxima, indíquese el nivel más elevado de protección.
- BL2

1/ Las unidades de contención que consisten en módulos de tratamiento de pacientes integrados a laboratorios deben identificarse por separado.

2/ Respecto de las instalaciones que contengan unidades de contención máxima y participen en el programa nacional de investigación y desarrollo para la defensa biológica, indíquese el nombre de la instalación y anótese: "Declaración con arreglo al formulario A, parte 2 iii)".

3/ Con arreglo al Manual de Bioseguridad en el Laboratorio de la OMS, 1983, o a otra norma equivalente.

7. Alcance y descripción general de las actividades, con indicación del tipo o los tipos de microorganismos y/o toxinas según proceda.

Básicamente se deben ejecutar las labores que permitan ser el laboratorio de referencia nacional y de la red internacional a que se encuentra adscrito el Instituto de Salud Pública, que permita controlar los laboratorios clínicos, hacer vigilancia epidemiológica y ejecutar los análisis de rutina que permite el desarrollo tecnológico.

En Bacteriología se mantiene seguimiento epidemiológico de Salmonella enteritidis, Escherichia coli, Microbacterias.

En Virología se mantiene referencia y seguimiento de Virus respiratorio, Virus Hepatitis C, VIH y Hantavirus.

Parte 2: Intercambio de información sobre los programas nacionales de investigación y desarrollo para la defensa biológica.

NOTA:

Por estar definida reglamentariamente la misión estratégica del Instituto de Salud Pública y en ella no se encuentra determinado en forma expresa el tema de la defensa biológica, se encuentra impedido de realizar tales investigaciones, por lo que en esta materia corresponde.

INFORME NEGATIVO

Sin embargo es necesario agregar que el Instituto de Salud Pública se fijó la meta de elaborar en conjunto un Manual de Bioseguridad que se encuentra editado y a disposición de quien lo solicite.

Manual de Bioseguridad
Instituto de Salud Pública de Chile
Edición 1995.

FORMULARIO A: Parte 2 i)**Declaración sobre el programa nacional de investigación y desarrollo para la defensa biológica**

¿Existe un programa nacional de investigación y desarrollo en materia de defensa biológica en el territorio del Estado Parte o en cualquier parte bajo su jurisdicción o control? Las actividades de semejante programa comprenderían: profilaxis, estudios de patogenecidad y virulencia, técnicas de diagnóstico, aerobiología, detección, tratamiento, toxinología, protección física, descontaminación y otras investigaciones conexas.

NOTA:

La inexistencia, por parte del Instituto de Salud Pública, de programas técnicos de investigación y desarrollo en estas materias determinan una respuesta negativa.

NO EXISTEN PROGRAMAS

FORMULARIO A: Parte 2 ii)

Programa nacional de investigación y desarrollo en materia de defensa Biológica

NO EXISTEN PROGRAMAS

FORMULARIO A: Parte 2 iii)

Programa nacional de investigación y desarrollo para la defensa biológica

Instalaciones

NO EXISTEN PROGRAMAS

3. Medidas de fomento de la confianza "B"

Intercambio de información sobre brotes de enfermedades infecciosas o fenómenos análogos causados por toxinas.

En la Tercera Conferencia de Examen se convino en que los Estados Partes siguieran aplicando la siguiente medida:

Intercambio de información sobre los brotes de enfermedades infecciosas y fenómenos análogos causados por toxinas y sobre todos los fenómenos que parezcan desviarse de las pautas normales en lo que respecta al tipo, el desarrollo, el lugar o el momento de aparición. La información proporcionada sobre los fenómenos que parecen desviarse de la norma incluirá, tan pronto como se disponga de ellos, datos sobre el tipo de enfermedad, la zona aproximada afectada y el número de casos.

Modalidades

En la Tercera Conferencia se convino en la siguiente definición:

Por brote o epidemia se entiende la presencia de un número extraordinariamente grande o inesperado de casos de una enfermedad o de un fenómeno relacionado con la salud en un lugar y en un momento determinados. El número de casos que se considere extraordinario variará según la enfermedad o el fenómeno de que se trate, así como según la comunidad afectada.

Por otra parte, se hizo referencia a las siguientes definiciones:

- Por epidemia de una enfermedad infecciosa se entiende la presencia de un número extraordinariamente elevado o inesperado de casos de una enfermedad de origen reconocida o presuntamente infeccioso, en un lugar y en un momento determinados. Se trata generalmente de una situación que evoluciona rápidamente y a la que es preciso responder con urgencia (documento interno de la OMS CDS/Mtg/82.1).
- La presencia en una comunidad o región de casos de una enfermedad, de un comportamiento específico relacionado con la salud o de otros fenómenos relacionados con ésta que rebasan claramente lo que en circunstancias normales cabría esperar. La comunidad o región y el período de tiempo en que se producen esos casos están claramente especificados. El número de casos que indica la presencia de una epidemia variará según el agente, el tamaño y el tipo de la población expuesta, la experiencia previa o la falta de exposición anterior a una enfermedad y el momento y el lugar en que se ha producido: la epidemicidad está, por lo tanto, relacionada con la frecuencia habitual de la enfermedad en la misma región, entre la población especificada y en la misma estación del año. Un solo caso de una enfermedad transmisible que no se haya dado durante mucho tiempo en una población así como toda primera invasión de una enfermedad no reconocida previamente en esa zona, exigen un informe inmediato y una investigación completa: dos casos de tal enfermedad que se den en la misma época y en el mismo lugar pueden ser prueba suficiente para estimar que se trata de una epidemia. (Last, J.M. A Dictionary of Epidemiology, Oxford University Press, Nueva York, Oxford, Toronto, 1983).

En la Tercera Conferencia de Examen se convino en lo siguiente:

1. Para determinar lo que constituye un brote de enfermedad se recomienda a los Estados Partes que se guíen por esos criterios.
2. Dado que no existen normas universales sobre lo que puede considerarse como desviación de la pauta normal, los Estados Partes convinieron en utilizar plenamente los sistemas nacionales existentes de presentación de informes sobre las enfermedades humanas y las enfermedades de animales y plantas, en lo posible, así como los sistemas existentes dentro de la OMS para actualizar anualmente información de antecedentes sobre las enfermedades ocasionadas por organismos que satisfacen los criterios correspondientes a los grupos de riesgo II, III y IV con arreglo a la clasificación que se establece en el Manual de Bioseguridad en el Laboratorio (OMS), de 1983, enfermedades cuya presencia en sus respectivas regiones no constituyen necesariamente una desviación de la pauta normal*.
3. Se considera especialmente importante el intercambio de datos sobre brotes de enfermedades que parezcan desviarse de la pauta normal en los casos siguientes:
 - Cuando la causa del brote no pueda ser fácilmente determinada y sea difícil diagnosticar el agente causal**.
 - Cuando la enfermedad puede ser ocasionada por organismos que satisfacen los criterios correspondientes a los grupos de riesgo III o IV, según la clasificación que se establece en el Manual de Bioseguridad en el Laboratorio (OMS), 1983.
 - Cuando el agente causal sea exótico en una región determinada.
 - Cuando la enfermedad siga una pauta inhabitual de desarrollo.
 - Cuando la enfermedad se produzca en la vecindad de laboratorios y centros de investigación que participen en el intercambio de datos del epígrafe A.
 - Cuando haya sospechas de que pueda estarse en presencia de una nueva enfermedad.

* Esta información debería proporcionarse con arreglo al Formulario B i).

** Queda entendido que pueden incluirse los organismos que se convierten en patógenos por técnicas de biología molecular, como la ingeniería genética.

4. Con objeto de fomentar la confianza debe presentarse un informe inicial en cuanto se tenga conocimiento de cualquier brote de una enfermedad infecciosa o de un fenómeno análogo que se desvíe de la pauta normal, informe que debería ir seguido de otros anuales.

Para que los Estados Partes puedan seguir un procedimiento normalizado, la Conferencia ha convenido en que, tanto para el intercambio de información inicial como para el anual, debería utilizarse el Formulario B ii) en la medida en que se conozca y/o sea aplicable la información solicitada.

5. Con objeto de mejorar la cooperación internacional en relación con las actividades bacteriológicas (biológicas) con fines pacíficos, y a fin de impedir o reducir las ambigüedades, dudas o sospechas, se alienta a los Estados Partes a que inviten a los expertos de otros Estados Partes a colaborar en el tratamiento del brote de la enfermedad de que se trate, y a responder favorablemente a tales invitaciones.

FORMULARIO B i)**Antecedentes sobre brotes de enfermedades infecciosas de las que se puede informar**

(Intercambio de información sobre brotes de enfermedades infecciosas o fenómenos análogos causados por toxinas)

NOTA:

El Instituto de Salud Pública, a través de los acuerdos internacionales de laboratorios de referencia, lleva una relación de los casos detectados en algunas cepas que se informan:

Enfermedad	Número de casos por año					
	1992	1993	1994	1995	1996	1997
- Salmonella tiphimurium	49	32	481	432	----	----
- Meningococia intermitente	390	537	482	585	480	----
- Hantavirus	----	----	----	2	3	2

FORMULARIO B ii)

Información sobre los brotes de enfermedades infecciosas y sobre hechos análogos que parecen desviarse de la pauta normal.

- | | |
|---|-----|
| 1. Fecha en que se ha tomado conocimiento de la existencia del brote. | -,- |
| 2. Localización y zona aproximada afectada | -,- |
| 3. Tipo de enfermedad/intoxicación | -,- |
| 4. Presunta fuente de la enfermedad/intoxicación | -,- |
| 5. Posibles agentes causales | -,- |
| 6. Características principales de los síntomas | -,- |
| 7. Síntomas detallados cuando proceda: | |
| - respiratorios | -,- |
| - circulatorios | -,- |
| - neurológicos/conductuales | -,- |
| - intestinales | -,- |
| - dermatológicos | -,- |
| - nefrológicos | -,- |
| - otros síntomas | -,- |
| 8. Desviaciones de la pauta normal en lo concerniente a: | |
| - tipo | -,- |
| - evolución | -,- |
| - lugar de producción | -,- |
| - momento de producción | -,- |
| - síntomas | -,- |
| - características de virulencia | -,- |
| - característica de resistencia a los medicamentos | -,- |
| - agentes difíciles de diagnosticar | -,- |
| - presencia de vectores inhabituales | -,- |
| - otras desviaciones | -,- |
| 9. Número aproximado de casos primarios | -,- |
| 10. Número total aproximado de casos | -,- |
| 11. Número de fallecimientos | -,- |
| 12. Desarrollo del brote | -,- |
| 13. Medidas adoptadas | -,- |

4. Medidas de fomento de la confianza "C"

Aliento de la publicación de resultados y promoción del empleo de conocimientos.

En la Tercera Conferencia de Examen se convino en que los Estados Partes siguiesen poniendo en práctica lo siguiente.

"Fomento de la publicación de los resultados de las investigaciones biológicas relacionadas directamente con la Convención de revistas científicas a disposición general de los Estados Partes, así como promoción del empleo con fines permitidos de los conocimientos obtenidos en esas investigaciones".

Modalidades

En la Tercera Conferencia de Examen se convino en lo siguiente:

1. Se recomienda que los resultados de las investigaciones básicas en las ciencias biológicas, y sobre todo de las directamente relacionadas con la Convención, no se consideren secretos, en general, y que los resultados de las investigaciones aplicadas tampoco se consideren secretos, en la medida de lo posible y sin perjuicio de los intereses nacionales y comerciales.
2. Se alienta a los Estados Partes a que proporcionen información sobre su política en lo que concierne a la publicación de los resultados de las investigaciones biológicas y a que indiquen, entre otras cosas, sus políticas en lo que se refiere a la publicación de los resultados de las investigaciones efectuadas en laboratorios y centros de investigación que sean objeto de intercambio de información conforme a la Sección A, así como a la publicación de los resultados de las investigaciones sobre brotes de enfermedades comprendidas en la Sección B, y a que proporcionen información sobre las revistas científicas y demás publicaciones científicas pertinentes a disposición general de los Estados Partes.
3. La Tercera Conferencia de Examen discutió la cuestión de la cooperación y la asistencia en lo que se refería a la manipulación sin peligro del material biológico objeto de la Convención. Llegó a la conclusión de que otros órganos internacionales se ocupaban de esta cuestión y apoyó los esfuerzos destinados a intensificar tal cooperación.

NOTA:

En general, sin conocimiento previo del contenido de este documento, podemos informar que se cumple este punto, por cuanto el Instituto de Salud Pública en su misión destaca el informar a la red referencial a la que se encuentra adscrito y a todos los estamentos relacionados con el tema, a través de las publicaciones e informes periódicos que se entregan a las instancias Ministeriales pertinentes.

5. Medidas de fomento de la confianza "D"

Promoción activa de los contactos

En la Tercera Conferencia de Examen se convino en que los Estados Partes siguiesen poniendo en práctica lo siguiente:

"Promoción activa de contactos entre científicos, otros especialistas e instalaciones dedicados a investigaciones biológicas directamente relacionadas con la Convención, comprendidos los intercambios y las visitas para investigaciones conjuntas sobre una base recíprocamente convenida".

Modalidades

En la Tercera Conferencia de Examen se convino en lo siguiente:

A fin de promover activamente los contactos profesionales entre científicos, proyectos de investigaciones conjuntas y otras actividades destinadas a evitar o reducir las ambigüedades, dudas y sospechas y a mejorar la cooperación internacional en la esfera de las actividades bacteriológicas (biológicas) con fines pacíficos, se alienta a los Estados Partes a que en la medida de lo posible proporcionen información:

- sobre las conferencias, seminarios y simposios internacionales proyectados y otras manifestaciones semejantes concernientes a las investigaciones biológicas directamente relacionadas con la Convención.
- sobre otras oportunidades para el intercambio de científicos, la realización de investigaciones conjuntas u otras medidas para promover contactos entre los científicos dedicados a investigaciones biológicas directamente relacionadas con la Convención.

Para que los Estados Partes puedan seguir un procedimiento normalizado, en la Tercera Conferencia de Examen se ha convenido en que se utilice el Formulario D para el intercambio de información a este respecto.

FORMULARIO D**Promoción activa de los contactos****1. Conferencias, simposios y seminarios internacionales previstos y demás foros análogos de intercambio**

En relación con cada uno de tales acontecimientos, se debe proporcionar la información siguiente;

- | | |
|--|---|
| - Nombre de la conferencia, etc. | <u>X Congreso Latinoamericano de Toxicología y Reunión de Directores de Centros de Toxicología de América Latina.</u> |
| - Entidades organizadoras, etc. | <u>La Habana - Cuba</u> |
| - Fecha de celebración | <u>23 al 28 de Noviembre de 1998</u> |
| - Lugar de celebración | <u>La Habana - Cuba</u> |
| - Temas principales de la conferencia, etc. | <u>Toxicología</u> |
| - Condiciones de participación | <u>.-</u> |
| - Puntos de contacto para más información, inscripción, etc. | <u>.-</u> |

2. Información relativa a otras oportunidades

Como dato ilustrativo, en junio de 1996 se realizó el Primer Simposio Internacional sobre Tests de Toxicidad, en el que se estudió la implementación de las "guidelines" para estos efectos, contando con los expertos de Japón, Drs. Yuzo Hayashi y Motoe Katoh.

6. Medida de fomento de la confianza "E"

Declaración de legislación, reglamentos y otras medidas

En la Tercera Conferencia de Examen los Estados Partes convinieron en poner en práctica lo siguiente:

Como indicación de las medidas que han adoptado para aplicar la Convención, los Estados Partes declararán si han adoptado legislación, reglamentos u otras medidas:

- a) con el fin de prohibir el desarrollo, la producción, el almacena-miento, la adquisición o la retención de agentes microbianos u otros agentes biológicos o las toxinas, armas, el equipo y los vectores especificados en el artículo I de la Convención en sus territorios o en otros territorios bajo su jurisdicción o control;
- b) en relación con la exportación o la importación de microorganismos patogénicos para el hombre, los animales y las plantas o de toxinas de conformidad con la Convención.

Los Estados Partes llenarán el formulario adjunto (formulario E) y deberán estar dispuestos a presentar copias de la legislación o los reglamentos o precisiones por escrito de otras medidas a pedido del Departamento de Asuntos de Desarme de las Naciones Unidas o de un Estado Parte. Anualmente los Estados Partes indicarán, también en el formulario adjunto, si se ha introducido alguna enmienda en la legislación, los reglamentos o las otras medidas.

FORMULARIO EDeclaración de legislación, reglamentos y otras medidas

Asunto	Leyes	Reglamentos	Otras Medidas	Introducción de enmiendas desde el año pasado
a) Desarrollo, producción, almacenamiento, adquisición o retención de agentes microbianos, biológicos de las toxinas y los vectores espeeificados en el Artículo 1.	Sí	Sí	-0-	-0-
b) Exportación de microorganismos* y toxinas.	No	No	-0-	-0-
c) Importación de microorganismos* y toxinas.	Sí	Sí	-0-	-0-

NOATA:

La legislación actual se encuentra descrita en los artículos pertinentes del Código Sanitario; Reglamento del Sistema Nacional de Control de Medicamentos, Alimentos, Uso Médico y Cosméticos. Decreto Supremo N° 1876/95 del Ministerio de Salud y, en lo que compete sólo a las importaciones la Ley de Aduanas N° 18.164 del 17 de Septiembre de 1982.

* Microorganismos patogénicos para el hombre, los animales y las plantas, de conformidad con la Convención.

7. **Medida de fomento de la confianza "F"**

Declaración de actividades anteriores en programas de investigación y desarrollo biológico con fines ofensivos y/o defensivos

Con el objeto de acrecentar la transparencia y la apertura, los Estados Partes declararán si han realizado o no algún programa de investigación y desarrollo biológicos con fines ofensivos y/o defensivos desde el 1° de Enero de 1946.

En caso afirmativo, los Estados Parte proporcionarán información sobre esos programas utilizando el Formulario F.

INFORME NEGATIVO: No existen

FORMULARIO F**Declaración de actividades anteriores en programas de investigación y desarrollo biológico con fines ofensivos y/o defensivos**

1. Fecha de entrada en vigor de la Convención en el Estado Parte: la República de Chile ratificó el 22.ABR.1980 y la Convención está en vigor desde el 26.MAR.1975.
2. Programas anteriores de investigación y desarrollo biológicos con fines ofensivos:
 - NO EXISTEN
 - Período(s) de actividad: - o -
 - Resumen de las actividades de investigación y desarrollo. Indique si se desarrollaron trabajos relacionados con la producción, el ensayo y la evaluación, la confección de armas con agentes biológicos y su acumulación, el programa de destrucción de dichos agentes y armas y otras investigaciones análogas: - o -
3. Programas anteriores de investigación y desarrollo biológicos con fines defensivos: - o -
 - NO EXISTEN
 - Período(s) de actividad: - o -
 - Resumen de las actividades de investigación y desarrollo. Indique si se desarrollaron trabajos en las siguientes esferas: profilaxis, estudios de patogenecidad y virulencia, técnicas de diagnóstico, aerobiología, detección, tratamiento, toxinología, protección física, descontaminación y otras investigaciones conexas, señalando, de ser posible, el lugar en que se desarrollaron.

INFORME NEGATIVO: No existen

8. **Medida de fomento de la confianza "G"**

Declaración de las instalaciones de producción de vacunas

Para acrecentar aún más la transparencia de la investigación y el desarrollo biológicos relacionados con la Convención y ampliar los conocimientos científicos y técnicos según lo convenido en el artículo X, cada Estado Parte declarará todas las instalaciones, tanto gubernamentales como no gubernamentales que estén dentro de su territorio o sometidas a su jurisdicción o control en cualquier parte y que produzcan vacunas con autorización del Estado Parte para la protección de los seres humanos. La información se proporcionará en el formulario G adjunto.

FORMULARIO G**Declaración de instalaciones de producción de vacunas**

1. Nombre de la instalación: Departamento de Producción del Instituto de Salud Pública de Chile
2. Ubicación (dirección postal): Avda. Marathon N° 1000, ÑUÑO A - SANTIAGO CHILE
3. Descripción general de los tipos de enfermedades que se combate:
- Difteria, con la vacuna Anti-Difteria
 - Pertusis, con la vacuna Anti-Pertusis
 - Tétanos, con la vacuna Anti-Tétanos
 - Fiebre Tifoidea, con la vacuna Anti-Fiebre Tifoidea
 - Rabia Humana, con la vacuna Anti-Rábica Humana
 - Rabia Canina, con la vacuna Anti-Rábica Canina

NOTA:

El Instituto de Salud Pública de Chile, es el productor oficial de vacunas y de algunos productos biológicos para los requerimientos del sistema de salud a través de su Departamento de Producción que cuenta con instalaciones de acuerdo a las normas de GMP y GLP propiciadas por la OMS.

Se debe hacer mención que el Departamento de Producción del Instituto de Salud Pública, se encuentra abocado a un proyecto de conjugación de la Vacuna DPT con Hemophilus Influenzae, con el objetivo de disponer a la brevedad de una vacuna tetravalente para aplicación a los lactantes.

Lo anterior es lo que podemos informar, reiterando que la capacidad de control del Instituto de Salud Pública, está determinada por la juricidad vigente, expresada en el Código Sanitario y el Reglamento D.S. 1876/95, que fija los marcos en que se desarrollen las actividades de control.

CHINA

(22 April 1997)

The Permanent Mission of the People's Republic of China to the United Nations presents its compliments to the United Nations Centre for Disarmament Affairs and has the honour to transmit to the Centre herewith the Report of the People's Republic of China on the information and data as agreed to in the Final Declaration of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction in calendar year 1996.

1、资料交换中使用的“无资料申报”或“无新资料申报”的申报表格

措 施	无资料申报	无新资料申报
A, 第1 部分	☐	☐
A, 第2 部分 (一)	☐	☐
A, 第2 部分 (二)	☐	☐
A, 第2 部分 (三)	☐	☐
B (一)	☐	☐
B (二)	☐	☐
C	☐	☐
D	☐	☐
E	☐	☐
F	☐	☐
G	☐	☐

日期：1997年3月15日

公约缔约国：中华人民共和国

信任措施：“A”第二部分

交流关于本国生物战防御研究与发展方案的资料

(三) 部分：设施

1、名称：微生物流行病研究所

Institute of Microbiology and Epidemiology

2、位置：中国北京丰台东大街20号 100071

3、实验室面积（平方米）：

BL-2 330

BL-3 118

BL-4 0

总面积 4820

4、组织结构：

一) 人员总数： 227人

二) 人员划分

军 职 12人

文 职 215人

三) 人员类别划分

科学家 100人

工程师 2人

技术人员 107人

行政与后勤人员 18人

四) 科学/工程人员学科一览表

医学、公共卫生、微生物学、流行病学、空气微生物学、昆虫学、
动物学、药学、药理学及毒理学、有机化学、生物化学等。

五) 有/无合同人员

干部(包括回聘) 15人

工人 50人

六) 年经费: 298万元人民币

七) 下列领域的经费比例:

研 究 50%

发 展 50%

测试和评估 0%

八) 设施中研究成果均公开发表

九) 本设施1996年公开发表的论文及报告清单如下:

题 名: 粤桂琼纳科昆虫的初步调查

作 者: 安继尧, 郝宝善, 龙芝美, 严格

地 址: 北京 军事医学科学院微生物流行病学研究所 100071

出 处: 医学动物防制 1996年 第12卷 第3期 15-16

参考文献: 10篇

关键词: 纳亚属; 真纳亚属; 蝇纳亚属; 幼虫; 成虫

摘 要: 1986—1993年, 在广西傣族自治区、广东省和海南省, 进行了纳科昆虫的调查。经鉴定, 共一属三亚属21种纳, 其中真纳亚属2种, 纳亚属9种和蝇纳亚属10种。

题 名: 黄足真纳幼期发育的观察

外文名: Observation on the immature development of *Simulium* (*Eusimulium*) *aureohirtum* (Diptera: Simuliidae)

作 者: 安继尧, 郝宝善, 严格

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出 处: 寄生虫与医学昆虫学报 1995年 第2卷 第3期 182-185

参考文献: 12篇

题 名: 黄足真纳孳生习性和幼虫龄期的观察

外文名: The Ecological Observation of Eggs, Larvae and pupae of *Simulium* (*Eusimulium*) *Aureohirtum* (Diptera: Simuliidae)

作 者: 安继尧, 龙芝美, 郝宝善, 刘金华, 樊广成

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出 处: 中国媒介生物学及控制杂志 1996年 第7卷 第2期 105-107

参考文献: 07篇

关键词: 黄足真纳; 卵; 幼虫; 蛹

摘 要: 该文报道黄足真纳幼期的孳生习性及其幼虫龄期组成。卵全部在0.3~3cm深的水中漂浮的茅草叶上采获, 在石块和砖头、塑料等杂物上未查到卵。在茅草叶、石块和杂物上共采获728条幼虫, 茅草叶、石块和杂物上的幼虫数分别占总数的57.1%、35.3%和7.6%。共采获217只蛹, 茅草叶上蛹数占采蛹总数的78.3%, 石块上仅占21.7%, 在杂物上未采到。黄足真纳幼虫分为5个龄期, 采用1~3龄幼虫较少, 4~5龄较多, 占幼虫总数的81.2%, 大部分幼虫已成为成熟幼虫。

题 名: 山西省首次恙虫病流行的初步调查和实验研究
作 者: 陈香蕊: 郑乡占: 于强: 张永国: 霍勤: 段林枝: 程聪: 张雪颖
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出 处: 军事医学科学院院刊 1993年 第20卷 第1期 29
关键词: 恙虫病: 流行病学

题 名: 山西省首次流行恙虫病的证实
外文名: Confirmation of the First Epidemic of Scrub Typhus in Shanxi Province
作 者: 陈香蕊: 郑乡占: 于强: 张永国: 段林枝: 霍勤: 张雪颖
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出 处: 中国人兽共患病杂志 1996年 第12卷 第2期 2

题 名: 聚合酶链反应和平板计数检测土拉弗氏菌气溶胶稳定性的比较
外文名: Detection of Francisella Tularensis in Aerosol by Polymerase Chain Reaction Vs Plate Counting

作 者: 翟俊卿: 车凤翔: 张松乐: 陈梅玲: 杨瑞霞
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出 处: 中国公共卫生学报 1996年 第15卷 第1期 14-16
参考文献: 04篇

关键词: 聚合酶链反应: 土拉弗氏菌: 气溶胶

摘 要: 为了提高检测生物气溶胶的特异性和敏感性, 分别用平板计数和聚合酶链反应 (PCR) 对土拉弗氏菌气溶胶的稳定性进行了研究。结果表明PCR对细菌数目的估计高于平板计数结果, 并且PCR在采样后的3h就可以得出定性结果, 而土拉弗氏菌平板计数则需要3-7天。

题 名: 土拉弗氏菌的PCR检测
外文名: Detection of Francisella tularensis by Polymerase Chain Reaction

作 者: 翟俊卿: 杨瑞霞: 郭光彪: 鹿建春: 张松乐: 陈梅玲: 车凤翔
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出 处: 中国人兽共患病杂志 1996年 第12卷 第3期 45-46
参考文献: 09篇

题 名: Eppendorf管与微孔板ELISA检测效果的比较

作 者: 翟俊辉

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出 处: 中国卫生检验杂志 1995年 第5卷 第6期 379-380

参考文献: 02篇

题 名: 微波照射对豆腐皮的杀菌效果

外文名: Germicidal efficacy of microwave irradiation in disinfection of compressed bean curd

作 者: 丁兰英; 李荣芬; 李素卿

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出 处: 中国消毒学杂志 1996年 第13卷 第3期 166-167

关键词: 豆腐皮消毒; 微波; 细菌总数; 大肠菌群

摘 要: 检测表明, 市售豆腐皮污染细菌总数 >614700 cfu/g, 大肠菌群数达 240000 cfu/100g。经 2450 MHz、 650 W微波照射5分钟, 细菌总数减至 8568 cfu/g, 大肠菌群阴性。试验条件下贮存45天, 两种细菌的指标都符合出厂卫生标准。照射后, 豆腐皮失水 12.17% 。

题 名: 芳酰胺类及呋喃丙酰胺类化合物对白纹伊蚊刺叮行为的影响

外文名: Effect of aromaticamide and furanpropionamide on biting behavior of *Aedes albopictus*

作 者: 董桂香; 董言德; 董瑞武; 王牧义

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出 处: 寄生虫与医学昆虫学报 1996年 第3卷 第2期 106-110

参考文献: 10篇

关键词: 白纹伊蚊; 刺叮行为; 驱避剂

摘 要: 用动物试验和人体试验方法研究了多种化合物对白纹伊蚊(*Aedes albopictus*)刺叮行为的影响。比较了不同化合物完全阻止蚊虫刺叮(驱避)的时间。化合物ArA-3|的驱蚊时间最长, 而且对淡色库蚊(*Culex pipiens pallens*)的驱避时间明显长于白纹伊蚊。测定了白纹伊蚊对一些化合物的50%反应剂量(RD-50|), 在所试6种化合物中ArA-3|的RD-50|值最小, 明显小于标准驱避剂DEET。试验还表明气流可改变化合物的驱避作用, 随着气流速度增加, 加速化合物的挥发, 因而降低了驱避作用。

题 名: 昆虫驱避剂DEET在生物体内的分布及毒理学

外文名: Biodistribution and toxicology of insect repellent DEET

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出 处: 寄生虫与医学昆虫学报 1995年 第2卷 第2期 117-122

参考文献: 30篇

题 名: 应用单抗和流式细胞仪分析淋球菌的表面抗原

外文名: Analysis of Surface Antigen Molecule Expression on Serovar Strains of *Neisseria gonorrhoeae* by Flow Cytometry

作 者: 端青; 赵忠利; 黄策; 张双喜

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出 处: 微生物学报 1996年 第36卷 第5期 379-384

参考文献: 03篇

关键词: 淋球菌; 单克隆抗体; 流式细胞仪

摘 要: 报告了利用流式细胞仪测定分析 10株抗淋球菌脂多糖单克隆抗体所识别的抗原分子表达的特点, 定量地显示了这些抗原分子表达的稳定性和数量的多少, 评价了单克隆抗体与不同血清型淋球菌的反应性。

题 名: 灭鼠防霉毒饵的现场试验研究

外文名: Study of the Preservatized Poison Bait (Field Trials)

作 者: 郭天宇; 潘凤庚; 周培盛; 朱少凡; 黄佳亮; 林立群

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出 处: 中国媒介生物学及控制杂志 1996年 第7卷 第2期 112-114

关键词: 毒饵; 防霉剂; 现场试验; 鼠类

摘 要: 本文报告 0.1%4号防霉剂复方大米防霉饵及0.005%杀鼠晶4与防霉剂复方大米防霉毒饵对褐家鼠的现场试验研究结果。试验证实鼠类对其十分喜食, 防霉效果可持续1~2周不霉变, 现场灭鼠率高达96.7%~98.6%。本研究与实验室研究结果一致, 为解决因毒饵霉变而影响灭鼠效果的难题, 找到了新的途径。

题 名: 大白鼠耐饥渴试验初步观察

作 者: 郭天宇; 潘凤庚

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出 处: 中国公共卫生学报 1996年 第15卷 第3期 169

题 名: 军人有关艾滋病的知识、态度及行为调查

外文名: A Study on AIDS-related Knowledge, Attitude and Behavior in Servicemen of China

作 者: 韩光红; 徐静; 龚自力; 颜锦北; 邓兵; 范国英; 张习坦; 马静

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出 处: 中华预防医学杂志 1996年 第30卷 第2期 94-97

参考文献: 08篇

关键词: 获得性免疫缺陷综合征; 军事人员; 知识

摘 要: 对中国军人有关艾滋病知识、态度和行为进行了调查。采用不记名自填问卷方式, 调查1058名军队各类人员。其中76.7%~89.5%的人对AIDS的危险性和传播途径有比较正确的认识, 但答对全部问题者只占8.5%。艾滋病知识的主要来源是报刊杂志和课外书籍; 大多数人认为自己感染艾滋病的可能性为0或极小; 74.0%的人希望获得艾滋病知识; 83.2%愿意接受有关检查; 80.2%的人为了预防艾滋病, 能够控制或改变自己的行为。这些说明, 全面和准确地宣传教育对预防艾滋病病毒感染将起到积极作用。

题 名: 紫外线与过氧化氢对甲型肝炎病毒协同灭活效果的实验观察

外文名: Experimental observation on synergetic efficacy of ultravioletrays and hydrogen peroxide in inactivating HAV

作 者: 韩友圻; 张敏丽; 陈添弥; 刘育京

地 址: 北京 军事医学科学院微生物流行病学研究所 100071

出 处: 中国消毒学杂志 1996年 第13卷 第1期 1-5

参考文献: 10篇

关键词: 病毒灭活; 协同作用; 紫外线; 过氧化氢; 甲型肝炎病毒

摘 要: 以细胞感染法检测紫外线与过氧化氢对甲型肝炎病毒联合灭活的效果。结果, 照射强度为 $300 \mu W/cm^2$ 的紫外线与1%过氧化氢联合作用5分钟, 可将该病毒灭活99.94%, 远高于单以紫外线或过氧化氢作用者。

题 名: 甲型肝炎病毒PCR检测结果与其感染性关系的研究

外文名: Study on the relationship between result of PCR of HAV and its infectivity

作者: 韩友圻; 张敏丽; 杨瑞霞; 陈添弥; 刘育京
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出处: 中国消毒学杂志 1996年 第13卷 第3期 133-138
参考文献: 05篇

关键词: 甲型肝炎病毒灭活; 灭活指标; PCR

摘要: 据检测, 以 $300 \mu\text{W}/\text{cm}^2$ 紫外线照射10分钟, 或用1%过氧化氢处理30分钟, 对甲型肝炎病毒(HAV)感染性的灭活率为99.99%, 但用PCR法未检出5'端非编码区的扩增片段; 经紫外线照射20分钟, HAV感染性虽全部消失, 但仍可检出P1区扩增片段。结果表明 HAV感染性的有无与PCR扩增产物检出与否无平行关系。

题名: 室内空气中微生物粒子沉降量与其浓度的关系

外文名: Relationship between sedimentation amount and concentration of microorganism particles in air

作者: 胡庆轩; 蔡增林
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出处: 中国消毒学杂志 1996年 第13卷 第3期 151-155
参考文献: 17篇

关键词: 空气微生物; 空气微生物沉降量; 空气微生物浓度; 细菌; 真菌

摘要: 对室内空气, 用Andersen采样器采样, 测得浮游细菌与真菌粒子平均浓度分别为 $1414 \text{ cfu}/\text{m}^3$ 与 $1167 \text{ cfu}/\text{m}^3$; 用平板沉降法采样, 测得其平均沉降量分别为 $1.22 \text{ cfu}/\text{平板} \cdot \text{min}$ 与 $0.30 \text{ cfu}/\text{平板} \cdot \text{min}$ 。细菌和真菌粒子沉降量与其浓度均呈正相关。由平板沉降法采样推算的室内空气浮游菌浓度明显低于以Andersen采样器测定者。

题名: 三种空气微生物采样方法的比较

外文名: Comparison of Three Methods for Sampling Airborne Microbes

作者: 胡庆轩; 徐秀芝; 姜黎; 刘敏霞
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出处: 城市环境与城市生态 1996年 第9卷 第3期 58-61
参考文献: 14篇

关键词: 空气微生物; 采样方法; 浓度; 粒子大小分布

摘要: 在室内自然条件下, 对三种空气微生物采样方法进行了比较。结果表明, ANDERSEN采样器法、LWC-1型采样器法和平板沉降法测定的室内空气微生物

物粒子浓度分别为2634个/ m^3 、2395个/ m^3 和1389个/ m^3 。LWC-1型和ANDERSEN二种采样器的采样结果之间没有明显差异,二种采样器的采样结果均明显高于平皿沉降法的采样结果。ANDERSEN采样器的采样效率高,且可同时测定空气微生物粒子的浓度和粒子大小分布,是观测和研究空气微生物的首选采样器。

题 名: 艾滋病实验室的气溶胶安全检测实验

作 者: 胡庆轩

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出 处: 中华预防医学杂志 1996年 第30卷 第1期 29

题 名: 沉降法测定大气真菌孢子含量公式的检验

外文名: Test for Gravity Precipitation Method of Measuring
Atmospheric Fungus Particle Load

作 者: 胡庆轩; 徐秀芝; 车凤翔; 蔡增林; 何亦祥

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出 处: 环境与健康杂志 1996年 第13卷 第1期 28-30

参考文献: 06篇

关键词: 大气真菌孢子; 含量; 沉降量

摘 要: 在沈阳市对作者提出的由大气真菌孢子的沉降量计算大气真菌孢子含量的公式进行了检验。结果表明,在沈阳市由作者公式计算的大气真菌孢子含量为1824个/ m^3 , A·S采样器测定的大气真菌孢子含量为1807个/ m^3 ,二者之间的比值为1.0, $t=0.098$, $P>0.50$,两种方法得出的大气真菌孢子的含量非常相近。经验证,本公式是一个准确、简便的计算大气真菌孢子含量的公式。

题 名: 日本人群中HEV感染的血清学调查

外文名: Serological study on hepatitis E virus infection in Japanese
population

作 者: 黄如统; 中园直树

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出 处: 军事医学科学院院刊 1996年 第20卷 第3期 188-190

参考文献: 06篇

关键词: E型肝炎病毒; ELISA; 抗体; 病毒; 日本人群

摘要: 应用纯化的HEV(67A株)热灭活抗原进行ELISA试验,测定日本大阪地区收集的149例各种肝病患者急性期血清中的抗HEV抗体,获得19份阳性(阳性率为12.7%),其中单纯抗HEV IgM阳性11份和抗HEV IgG阳性6份,两者都阳性的2份。同时测定307例健康人体检标本,获得单纯抗HEV IgM和IgG阳性各1份(阳性率为0.6%),表明日本人群中存在HEV感染。

题名: 我国戊型肝炎病毒组织培养分离株的RT-PCR及序列分析

作者: 黄如统; 中|YUAN|直树; 石井庆藏; 川俣治

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出处: 军事医学科学院院刊 1996年 第20卷 第2期 84

参考文献: 02篇

关键词: 戊型肝炎病毒; 聚合酶链反应

题名: 我国散发性戊型肝炎病毒核苷酸和氨基酸序列测定

外文名: Detection of nucleotide and amino acid sequences of the sporadic hepatitis E virus from some regions of China

作者: 黄如统; 中园直树; 石吉庆藏; 川俣治; 川口二; 冢田裕

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出处: 军事医学科学院院刊 1996年 第20卷 第3期 185-187

参考文献: 07篇

关键词: E型肝炎; 基因; 病毒; 核苷酸序列; 氨基酸序列

摘要: 报道了我国北京和广州地区散发性戊型肝炎病毒核苷酸和氨基酸序列的测定结果。采集北京、广州两地1993年散发的戊型肝炎(HE)病人急性期血清,取抗-HEV阳性的血清抽提病毒RNA,用HEV RT1.1保守区中的特异引物反转录合成cDNA,再用两对引物进行套式聚合酶链反应(RT-PCR),然后将阳性的PCR产物直接进行序列分析,共获得3份HEV序列,并推测其氨基酸序列。将这3份HEV(210bp)序列与国内外已知的HEV相应序列(4545-4754)进行比较,结果从北京一名病人(B-9)中检出与缅甸株一致的序列,核苷酸和氨基酸序列的同源性为100%;从广州两名病人(G-9和G-20)中检出的序列均不同于国内外已知HEV的序列,其核苷酸的同源性为74.3%-67.1%;氨基酸的差异性为14.3%-22.9%。经分析可能为一种新的HEV基因型,这将为HE的防治和诊断提供科学依据。

题名: 对法国戊型肝炎病毒分离株(F86)的传代及初步鉴定

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参考文献: 03篇

关键词: 戊型肝炎病毒: 法国F86株: 聚合酶链反应

题名: 一步法提取RNA反转录-多聚酶链反应检测汉坦病毒RNA

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出处: 中国公共卫生 1996年 第12卷 第10期 438-440

参考文献: 11篇

关键词: 肾综合征出血热: 汉坦病毒: 反转录-多聚酶链反应

摘要: 用反转录-多聚酶链反应(RT-PCR)检测汉坦病毒(Hantavirus)的基因RNA, 同时与细胞分离病毒的敏感性进行比较。用异硫氰酸胍-载体吸附法, 一步提取汉坦病毒RNA。将脑腔接种汉坦病毒濒临死亡的乳鼠脑制成10%的悬液, 并系列稀释, 从 10^1 E-1到 10^2 E-12的12梯度。结果表明, 该引物能够扩增出汉坦病毒H8205株的RNA, 说明汉坦病毒H8205株与76-118株在M片段上具有共同的保守序列。RT-PCR可以检测出 4.64×10^2 E-3TCLD-50/ml的病毒, 而用Vero-E-6细胞只能分离检测出 4.64×10^2 E-2TCLD-50/ml, 所以RT-PCR检测病毒比细胞分离检测病毒敏感。

题名: 一起戊型肝炎暴发的流行病学调查

外文名: An Epidemiological Survey on Hepatitis E Outbreak

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出处: 解放军预防医学杂志 1996年 第14卷 第3期 182-184

参考文献: 05篇

关键词: 戊型肝炎: 暴发

摘要: 1994年4月27日至5月15日, 驻天津某部队学院发生一起戊型肝炎暴发, 罹患率6.87%。病例均为男性, 年龄20-24岁, 症状普遍较轻。血清学检测发现, 24名病例全部抗-HAVIgG阳性, 其中23人抗-HEV阳性, HCV, CMV, EBV感染标志和HBsAg, 抗-HBcIgM均为阴性。用RT-PCR方法检测了3例病人血清和9例病人粪便的HEV RNA, 1份血清和3份粪便标本呈阳性反应, 证实这起肝炎暴发是HEV感染所致。炊事员可能是这起肝炎暴发的传染源。表明加强对

食堂和炊事员的卫生监督是十分重要的。

题 名: 介素6-核因子的结构、功能和基因调控

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出 处: 国外医学·分子生物学分册 1996年 第18卷 第2期 83-86

参考文献: 13篇

关键词: 介素6-核因子; 基因调控

摘 要: 基因调控是分子生物学中的核心问题, 它涉及到细胞生长、分化、衰老及个体的发育、肿瘤、心血管、代谢等方面疾病发生的分子基础。转录水平上的调控是基因调控的关键, 它主要包括两个内容, 即顺式调控元件和反式作用因子。基因表达的严格组织和细胞特异性与反式作用因子密切相关, 因此这是当前研究的热点之一。介素6-核因子(NF-IL6)作为反式作用因子是在90年代初克隆成功的, 它不仅能与各种急性蛋白以及与炎症有关的细胞因子的基因调控区结合, 在转录水平上对这些基因的表达起正调控作用, 而且还能与某些病毒基因的增强子结合, 表现出负调控作用。本文综述了NF-IL6的结构、功能及其在基因调节中可能发挥的作用。

题 名: U937和K562细胞株对登革病毒2型感染性的研究

外文名: Study on Dengue-2 Virus Infection with U937 and K 562 Cells

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出 处: 中华实验和临床病毒学杂志 1996年 第10卷 第3期 243-246

参考文献: 10篇

关键词: 登革病毒2型; 聚合酶链反应; 细胞株

摘 要: 运用逆转录-聚合酶链反应(RT-PCR)、酶抗体染色法结合电镜观察和病毒滴定, 初步研究了U937和K562细胞株对登革病毒2型感染性, 结果显示两株细胞均可被感染, U937和K562细胞的感染率分别为12%和33.3%。

题 名: 微波对医用矿物油类物品灭菌的研究

外文名: Study on sterilization of medical preparations of mineral oil group by microwave

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出 处: 中国消毒学杂志 1996年 第13卷 第1期 41-42

参考文献: 03篇

关键词: 微波灭菌; 医用油脂灭菌

摘 要: 经检测, 微波(频率2450MHz, 功率650W)照射20分钟, 可将盛于平皿中的液体石蜡与凡士林灭菌。对盛于平皿中的凡士林纱布, 照射45分钟亦能灭菌。

题 名: 一个高效表达且纯化简单的重组蛋白载体系统

外文名: A system of efficient expression and rapid purification of recombinant polypeptides

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参考文献: 07篇

关键词: 重组蛋白类; 表达载体; 谷胱甘肽转硫酶; 白细胞介素1

摘 要: 目前已发展了几种快速、有效地纯化细菌表达重组蛋白的方法。谷胱甘肽转硫酶(GST)融合表达系统是通过非变性条件下亲和吸附到谷胱甘肽-琼脂糖上, 从细菌粗提物中纯化融合蛋白的。为便于从融合蛋白中解离出目的多肽, 这个载体中含有特异的蛋白酶裂解位点。本研究比较了这个系统中的两个不同的载体。结果表明, 它们都能高效表达谷胱甘肽转硫酶-白介素1受体拮抗剂(GST-IL-1ra)融合蛋白, 但凝血酶对融合蛋白的裂解效率有很大区别, pGEX-KG载体不仅大大提高了凝血酶的裂解效率, 而且简化了纯化过程。因此, 它为大批量用细菌表达真核蛋白的制备纯化提供了一种简便、廉价而有效、可行的方法。

题 名: 不同类别物质对德国小蠊引诱作用的观察

外文名: Observations on the attractive effects of some materials to german cockroach

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出 处: 寄生虫与医学昆虫学报 1995年 第2卷 第3期 161-166

参考文献: 16篇

关键词: 德国小蠊; 引诱作用; 天然食物; 挥发性物质; 蟑螂酶-B(PB)

摘 要: 经红外传感器自动监测德国小蠊(*Blattella germanica*)取食行为试验结

果表明:在糖类中麦芽糖和葡萄糖引诱效果显高于乳糖、蔗糖和红糖;在6种测试食物中,炒豆粉、炒玉米粉和鱼粉引诱作用显高;植物汁液A的引诱力显高于同组试验中的蒿子、洋葱、芹菜和蒜;丙二醇的引诱力显比同批测试的丙三醇、正丁醇、乙醇和异丙醇为高;在5种香精试验中,香精A和菠萝香精的引诱效果显比香蕉香精、曲酒香精和杏仁香精高。在上述各组试验所得出的5种最佳引诱物与蟑螂酮-B(PB, periplanone-B)的综合比较试验显示,植物汁液A引诱效果最好,其次是麦芽糖,两者显比PB引诱效果好。同时,在蔬菜汁液、香精和醇类物质引诱试验中发现一个共同的趋势,即凡引诱力高的其嗅觉味道均是比较湿和的,相反,味道刺激性强的,则引诱力差。

题 名: 溴氰菊酯对白纹伊蚊(*Aedes albopictus*) C6/36细胞株的细胞遗传学效应
 外文名: Cytogenetic effects of deltamethrin on *Aedes albopictus* C6/36 cell line

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出 处: 寄生虫与医学昆虫学报 1996年 第3卷 第3期 164-168

参考文献: 06篇

关键词: 溴氰菊酯; C6/36细胞株; 细胞遗传学效应

摘 要: 本研究选择 $10\mu\text{g/ml}$ 、 $20\mu\text{g/ml}$ 、 $40\mu\text{g/ml}$ 浓度的溴氰菊酯处理白纹伊蚊C6/36细胞,以MMC作为阳性对照物,观察溴氰菊酯处理24h后对C6/36细胞染色体畸变率和姐妹染色单体互换(SCE)频率的影响。结果显示,三个浓度的溴氰菊酯对C6/36细胞染色体畸变率均没有显著影响($P < 0.05$);溴氰菊酯浓度在 $40\mu\text{g/ml}$ 时可诱导C6/36细胞SCE频率轻度增高($P > 0.05$),而溴氰菊酯浓度在 $10\mu\text{g/ml}$ 、 $20\mu\text{g/ml}$ 时,对C6/36细胞SCE频率没有诱导作用。表明溴氰菊酯对C6/36细胞的遗传学效应较弱。

题 名: 溴氰菊酯对白纹伊蚊C6/36细胞株的杀伤作用及其对形态影响的研究
 外文名: Studies on cytotoxic effects and morphological changes of deltamethrin treatment on *Aedes albopictus* C6/36 cell line

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出 处: 寄生虫与医学昆虫学报 1996年 第3卷 第2期 94-99

参考文献: 08篇

关键词: 溴氰菊酯; 白纹伊蚊C6/36细胞株; 杀伤作用; 形态影响

摘要: 本文采用MTT微量酶反应比色法, 研究了溴氰菊酯对白纹伊蚊C6/36细胞的杀伤作用、形态影响以及受损细胞的恢复。结果发现用溴氰菊酯处理24h后, 对C6/36细胞的半数毒性浓度(IC₅₀)为74.88 $\mu\text{g/ml}$, 且毒性作用强度随着药物增加而增强。溴氰菊酯浓度在20 $\mu\text{g/ml}$ 以上时可以诱发C6/36细胞形态改变, 表现为细胞呈多形性、细胞间有间隙、胞质内充满颗粒。以后随药物浓度的升高, 胞质出现空泡、染色质凝成粗大颗粒或无结构大块、大片细胞脱落、崩解、死亡。高浓度溴氰菊酯(160 $\mu\text{g/ml}$)作用于C6/36细胞, 其受损细胞的恢复与作用时间有关。作用24h的细胞, 在经历一段生长停滞后可缓慢恢复, 而作用48h的细胞, 则不可逆转的死亡。

题名: CD44单克隆抗体对人黑色素瘤细胞的体内外生物学特性的影响

外文名: Effect of Anti-CD44 McAb on the Biological Properties of Human Melanoma Cell Line in vivo and in vitro

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出处: 中华微生物学和免疫学杂志 1996年 第16卷 第5期 352-355

参考文献: 09篇

关键词: CD44; 单克隆抗体; 人黑色素瘤细胞

摘要: 为了深入揭示粘附分子CD44在肿瘤细胞中的作用, 分析了CD44单克隆抗体6B1对人黑色素瘤细胞HMM239体内外特性的影响。结果显示: 抗CD44的单抗6B1对HMM239与透明质酸的结合没有影响; 尾静脉注射6B1能一定程度地抑制HMM239细胞在裸鼠体内的致瘤性; 但在体外6B1却能促进HMM239细胞的增殖; 经检测发现, HMM239产生低水平的IL-2, 且细胞经CD44单抗6B1处理后能提高IL-2的表达水平。本文工作为深入揭示CD44在肿瘤细胞上的功能和作用机制奠定了基础。

题名: 小鼠白细胞介素-5的cDNA克隆及鉴定

作者: 梅俊杰; 高杰英; 丁广治; 孔祥英

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出处: 免疫学杂志 1996年 第12卷 第4期 262-263

参考文献: 06篇

题名: N40-B型杀鼠晶蓟花籽毒饵杀灭大白鼠的效果观察

外文名: The Observation of the Effect of Killing Albino Rats by
PoisonBaits of Shashujing Sunflowers

作者: 潘凤庚; 郭天宇; 舒国欣; 亢洪涛; 郭桂英

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出处: 中国媒介生物学及控制杂志 1996年 第7卷 第5期 345-347

参考文献: 02篇

关键词: 抗凝血灭鼠剂; 杀鼠晶; 敌鼠钠盐; 鼠类

摘要: 本文报告杀鼠晶毒水及其葵花籽毒饵杀灭小白鼠的效果。室内放置3-6个月的 0.005% N40-B型杀鼠晶毒水和浸泡72h N40-B型杀鼠晶葵花籽及籽仁, 对鼠有良好的杀灭效果。试鼠取食后经3-10天全部被杀死。杀鼠晶溶液的稳定性和对谷物的渗透性均比敌鼠钠盐溶液好。

题名: 中国藏族和维吾尔族人群丙型肝炎病毒基因型分析

外文名: Analysis of hepatitis C virus (HCV) genotypes from Tibetans and
Vighrus in China

作者: 宋宏彬; 王海涛; 唐时幸; 玉珍; 贡扎; 吉保新; 王天祥; 张习坦

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出处: 中华肝脏病杂志 1996年 第4卷 第3期 154-157

参考文献: 05篇

关键词: 丙型肝炎病毒; 基因型; 聚合酶链式反应

摘要: 目的与方法根据不同基因型丙型肝炎病毒 (HCV) 核心区基因序列, 合成一条通用引物和四条型特异性引物用于RT-PCR扩增反应。所得不同长度的扩增产物分别对应于HCV I、II、III、IV的基因型。用此方法对采自西藏的69例藏族和新疆的81例维吾尔族的丙型肝炎病毒阳性血清进行了分析。结果藏族的69例中3例为I型(3/69, 4.3%), 33例为II型(33/69, 47.8%), 4例为III型(4/69, 5.8%), 29例为混合型(29/69, 42.1%); 维吾尔族的81例中8例为I型(8/81, 9.9%), 14例为II型(14/81, 17.3%), 3例为III型(3/81, 3.7%), 56例为混合型(56/81, 69.1%)。这同我国内地汉族人群中丙型肝炎病毒基因型分布明显不同。结论HCV基因型的分布有一定的地区特异性。

题名: 抗疟新药ME-905对大鼠的急性毒性

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出处: 中国药理学通讯 1996年 第13卷 第2期 17-18

题 名: 河北省固安县北斜村HCV感染者三年随访研究

外文名: A Three-Year Follow-up Study of Hepatitis C Virus Infected Individuals from Beixie Village, Gu-an County, Hebei Province, China

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出 处: 中华流行病学杂志 1996年 第17卷 第3期 145-147

参考文献: 07篇

关键词: 丙型肝炎病毒; 抗-HCV随访研究

摘 要: 笔者对42例抗-HCV阳性者进行了三年随访研究, 发现血清ALT异常者占18.1%~26.2%, HCV RNA阳性率为80%。三年间抗-HCV年阴转率仅0.95%。抗-HCV抗体几何平均滴度(GMT)160左右, 1991年和1994年检测结果表明抗-HCV GMT值无显著差异, 抗体滴度与血清ALT水平以及HCV RNA无关。

题 名: 影响抗疟药现场体外药敏测定的某些因素

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参考文献: 02篇

关键词: 抗疟药; 恶性疟原虫

题 名: 风疹病毒气溶胶的逆转录-半套式PCR检测

外文名: Comparison of Detection of Rubella virus in Aerosol by Reverse Transcription-Seminested PCR

作 者: 汪晓辉; 杨瑞敏; 张朝盛; 张松乐; 陈梅玲; 车凤翔

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出 处: 中国公共卫生学报 1996年 第15卷 第1期 10-13

参考文献: 08篇

关键词: 风疹病毒; 气溶胶; 逆转录-半套式PCR

摘 要: 将已知浓度的风疹病毒液通过TE发生器进行气溶胶发生于气溶胶转鼓中, 搅匀后用AGI-10和Casella采样器进行气溶胶采样, 采样样品以不同浓度稀释后分别进行RT-SN-PCR和细胞培养。敏感性试验结果表明100TCID₅₀ l的RV病毒仍能被RT-SN-PCR检测到, 扩增片段为293bp, 经Hinc II酶切成12

1和172bp的酶切片段与理论设计吻合。相应的Vero细胞培养结果均为阴性。通过气溶胶耐喷和耐压试验证明RV在空气采样过程中因高压冲击衰亡。PCR检测微生物核酸,可不过多地考虑其生物衰亡,只要靶基因存在即有检测的可能性。

题 名: 连接酶链反应

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出 处: 国外医学·分子生物学分册 1996年 第18卷 第4期 160-164

参考文献: 20篇

关键词: 连接酶链反应

摘 要: 连接酶链反应 (LCR) 是继PCR后新发展的一种较有前景的体外核酸扩增技术。四条寡核苷酸引物在耐热连接酶作用下通过变性、复性、连接完成核酸的体外扩增,可准确地检测靶基因上的单个或几个碱基的突变。在遗传性疾病、肿瘤和病原微生物的快速、准确检测上有着广泛的应用前景。本文综述了该技术的原理、方法及近年来的初步应用。

题 名: 自主序列复制

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出 处: 中华医学检验杂志 1996年 第19卷 第5期 304-306

参考文献: 14篇

题 名: 半套式PCR扩增人抗体基因以增加抗体库的多样性

外文名: Amplification of human antibody genes with half-nested PCR to increase the diversity of antibody library

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出 处: 军事医学科学院院刊 1996年 第20卷 第1期 45-48

参考文献: 10篇

关键词: 半套式PCR; 引物设计; 抗体库; 多态现象; 聚合酶链反应; 抗体单克隆; 免疫球蛋白类

摘 要: 用重链5'末端8条引物(VH1a、VH3a、VH1f、VH3f、VH2f、VH4f、VH6a、VH6f)和3'末端1条引物(CG1z)以及轻链5'末端9条引物(VK1a、VK2a、VK3a

及VL1、VL2、VL3、VL4、VL5、VL6)和3'末端2条引物(CK1s和CL2)cDNA为模板对免疫球蛋白基因进行了PCR扩增。结果表明,重链的扩增率为50%,轻链的扩增率为44%。而先用信号肽序列为引物和以上的3'末端引物以cDNA为模板先进行第一次PCR,然后以该产物为模板再用以上方法进行第二次PCR时,不仅所有的引物都能扩增出来,而且其产量要比进行一次PCR的产量多得多。这表明用半套式PCR扩增人抗体基因能够增加抗体库的多样性。

题 名: 大、小鼠眼球的乙二醇甲基丙烯酸酯制片技术

作 者: 王翠娥; 徐在海

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出 处: 中国药理学会通讯 1996年 第13卷 第2期 54

题 名: [^3H]ME8101在小鼠体内的自显影定位分布

作 者: 王翠娥; 徐在海; 袁本利; 余寿忠; 张志

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出 处: 中国药理学会通讯 1996年 第13卷 第2期 56

题 名: 沙棘籽油对大鼠四氯化碳肝损伤的保护作用

作 者: 王翠娥; 徐在海; 周义清

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出 处: 中国药理学会通讯 1996年 第13卷 第2期 61

题 名: ME-905对大鼠亚急性毒性的实验研究

作 者: 王京燕; 邱伯安; 徐在海; 孙国章; 张敏; 吕富双; 洪松芳

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出 处: 中国药理学会通讯 1996年 第13卷 第2期 18

题 名: 用鸭乙型肝炎病毒感染试验评价人乙型肝炎病毒灭活效果的研究

外文名: Study on evaluation of efficacy of inactivating HHBV using DHBV infection test

作 者: 王太星; 蒋莉; 米志宝; 曹军田; 刘育京

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出 处: 中国消毒学杂志 1996年 第13卷 第3期 139-146

参考文献: 13篇

关键词: 肝炎病毒灭活检测; 人乙型肝炎病毒; 鸭乙型肝炎病毒; 戊二醛; 热力二氯异氰尿酸钠

摘要: 在所试剂量下, 煮沸、戊二醛与二氯异氰尿酸钠均可使DBHV与HHBV形态及其DNA-P破坏, 使DBHV对雏鸭的感染性灭活; 但除用二氯异氰尿酸钠处理外, 均不能将其DNA与表面抗原完全破坏。结果表明, 用DBHV雏鸭感染法进行消毒试验, 可间接, 但较准确反映出对HHBV的灭活效果。本试验与其他标志物试验相比, 较易推广。

题名: 抗体库的发展及未来

外文名: The development and future of antibody library

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出处: 生物化学与生物物理进展 1996年 第23卷 第4期 312-316

参考文献: 20篇

关键词: 抗体库; 单克隆抗体; 噬菌体抗体

摘要: 抗体库的出现为制备人源性单抗开辟了一条行之有效的途径。虽然该技术问世只有短短几年的时间, 但其筛选系统已有了很大的改进; 现已能够快速地从抗体库中筛选出各种具有不同用途的抗体。从而克服了传统杂交瘤技术的某些局限性。文章就抗体库的发展及其应用前景进行了概述。

题名: 寡营养细菌

外文名: Oligotrophic Bacteria

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出处: 微生物学通报 1995年 第22卷 第5期 302-304

参考文献: 14篇

题名: 滤膜正反面采样效果的比较

作者: 徐秀芝; 胡庆轩; 姜黎; 刘敏霞

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出处: 中国卫生检验杂志 1996年 第6卷 第5期 261-262

参考文献: 03篇

题 名: 乳酸漱口液的研究

外文名: Study on lactic gargle

作 者: 徐秀芝; 陈梅玲; 胡庆轩; 李军保; 姜黎

地 址: 北京 军事医学科学院微生物流行病学研究所 100071

出 处: 中国消毒学杂志 1996年 第13卷 第1期 27-29

关键词: 漱口液; 乳酸; 金黄色葡萄球菌; 白色念珠菌; 稳定性; 毒性

摘 要: 研制之漱口液含乳酸0.02%。作用1分钟可将金黄色葡萄球菌与白色念珠菌分别杀灭97.76%与97.45%。含漱1分钟,可灭除口腔菌78%。该液性能稳定,无毒。

题 名: 大鼠口服磷酸氧喹啉毒性研究

作 者: 徐在海; 宁殿型; 孔伍弟

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出 处: 中国药理学通讯 1996年 第13卷 第2期 18-19

题 名: Poly I:C毒性研究

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出 处: 中国药理学通讯 1996年 第13卷 第2期 18

题 名: 补骨脂素光化学法灭活血液中病毒的研究进展

外文名: Advances in research on inactivation of virus in blood by psoralen photochemical method

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出 处: 中国消毒学杂志 1996年 第13卷 第2期 92-96

参考文献: 33篇

关键词: 血液; 血液消毒; 病毒灭活; 补骨脂素; 紫外线

题 名: 微波杀菌规律的研究

外文名: Study on germicidal rule of microwave

作 者: 杨华明; 丁兰英; 刘育京; 李荣芬; 姚红双

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出 处: 中国消毒学杂志 1996年 第13卷 第2期 65-68

关键词: 微波; 杀芽胞作用; 枯草杆菌黑色变种: D-10|值

摘要: 试验结果表明, 在650W微波照射下, 杀灭敷料包中枯草杆菌黑色变种芽胞的D-10|值为1.94分钟。随着微波的功率增大、物品含湿率增高、物品包装密封及与洗必泰协同, 均有助于微波的杀菌。枯草杆菌黑色变种芽胞对微波的抗力强于嗜热脂肪杆菌芽胞。

题名: 紫外线和化学消毒剂监测方法的正确使用

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出处: 中华医院感染学杂志 1996年 第6卷 第3期 187-189

参考文献: 11篇

题名: 人类病毒疫苗的研究进展

外文名: Advance in viral vaccine research

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出处: 军事医学科学院院刊 1996年 第20卷 第2期 149-152

参考文献: 21篇

关键词: 病毒疫苗; 核酸

摘要: 简述了传统灭活病毒疫苗和减毒活疫苗的应用状况以及新型合成肽疫苗、亚单位疫苗、抗独特型抗体疫苗、基因工程疫苗的研究状况, 对核酸疫苗的研究进展、发展前景及存在问题进行了讨论。

题名: 我国登革二型病毒E基因的克隆与表达研究

外文名: Cloning and expression of the E gene of dengue-2 virus strain in China

作者: 于曼; 秦鄂德; 杨佩英; 孙蕾; 徐品芳; 司炳银

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出处: 中华微生物学和免疫学杂志 1996年 第16卷 第2期 125-129

参考文献: 06篇

关键词: 登革2型病毒43株; 逆转录-PCR; E基因表达

摘要: 以我国登革2型病毒43(D2-43)株RNA为模板, 采用RT-PCR技术扩增了E基因。扩增的cDNA片段约1290bp, 与预期大小相一致, 经HindIII酶切鉴定和Southern印迹杂交证实了E基因片段的特异性。将E基因的扩增片段首先克隆

到pBluescript II KS⁺质粒DNA中,利用重组子中载体的酶切位点,将该基因片段再克隆到高效表达载体pBV220中。用PCR技术从20个重组子中筛选出6个阳性克隆。经Sal I和Pst I酶切进一步鉴定,证明这6个重组质粒中均含有E基因片段。采用温控诱导,4小时表达的蛋白量约占菌体总蛋白的20%。经Western blot分析证明,表达的蛋白可与该病毒株的多克隆腹水抗体和登革2型病毒标准株的单克隆抗体起特异反应。

题 名: 现代预防医学与生态学的关系

作 者: 虞以新; 郝宝善

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出 处: 中国公共卫生 1996年 第12卷 第7期 333-334

题 名: 细胞内毒素及其诱导的细胞因子在革兰氏阴性菌败血症休克中的作用

作 者: 俞晓峰; 黄策

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出 处: 上海免疫学杂志 1996年 第16卷 第3期 190-192

参考文献: 14篇

摘 要: 细胞内毒素(LPS)是引起革兰氏阴性菌(GNB)败血症休克的重要始动因素。LPS通过与宿主体内相应受体结合,诱导效应细胞释放多种炎性细胞因子,如TNF- α 、IL-1和IL-6等。动物模型和临床研究表明,LPS攻击动物或GNB感染患者的血循环中炎性细胞因子均可明显增加,且与预后的关系密切。因此,针对LPS致病过程特点以及细胞因子在GNB败血症休克中的作用,寻找有效降低败血症休克病死率的方法已成为当今抗感染免疫研究领域的重点。

题 名: 人抗E. coli J5噬菌体抗体制备的初步研究

外文名: Preliminary study on preparation of human phage antibodies to E. coli J5 strain

作 者: 俞晓峰; 王海涛; 黄策

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出 处: 生物化学与生物物理进展 1996年 第23卷 第3期 245-250

参考文献: 15篇

关键词: PCR; 噬菌体抗体库; 人源抗体

摘 要: 以E. coli J5株对含人Ig基因的噬菌体抗体库进行淘筛富集,免疫印迹筛

选, 以及ELISA检测, 结果获得4株能与E. coli J5株结合的阳性克隆, 且阳性克隆结合抗原的活性可分别被E. coli J5株、E. coli Rc-LPS和抗E. coli J5株核心糖脂域McAb抑制。PCR检测表明, 4株阳性克隆均分别带有约660 bp大小的重链和轻链基因片段。SDS-PAGE与蛋白质印迹的结果显示, 经IPTG诱导的阳性克隆能表达分子量约为50 000大小的蛋白。提示该4株阳性克隆能够表达具有一定抗原结合活性的人源Fab片段。

题 名: 抗细菌脂多糖核心糖脂域McAb免疫反应特性的研究

外文名: Studies on Characteristics of Immunological Reactivities of Monoclonal Antibodies to Core Glycolipid of Bacterial Lipopolysaccharides

作 者: 俞晓峰; 黄策; 李成文

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出 处: 单克隆抗体通讯 1995年 第11卷 第3-4期 11-16

参考文献: 11篇

关键词: 革兰氏阴性菌; 脂多糖; 抗体; 单克隆; 交叉反应

摘 要: 应用ELISA、免疫印迹及加成指数等方法对我们制备的3株(EL1、EL2和EL3)抗E. coli J5株和1株(3H4)抗S. minnesota R595株核心糖脂域McAb进行了研究。结果表明, 4株McAb与不同类型的LPS均有不同程度的交叉反应, 其中以EL2、EL3和3H4 3株McAb的交叉反应更为广泛, 且可与类脂A结合。常见的革兰氏阴性菌(GNB)及其LPS均有较强的抑制EL3和3H4结合抗原的作用, EL1和EL2的结合抗原反应也可明显被E. coli J5株和S. minnesota R595株或LPS(Re-及Rc-LPS)所抑制; 且4株McAb间与两突变菌株结合反应的加成指数(A. I)均较低。提示4株抗核心糖脂域McAb识别LPS抗原的表位相似或相距较近。McAb表现出的与LPS较广泛的交叉反应性, 可能与其作用位点位于LPS内核及类脂A结构中具有共同抗原表位区域有关。

题 名: 抗细菌脂多糖核心糖脂域单克隆抗体在实验性菌血症中的保护作用

外文名: Protective Effects of Monoclonal Antibodies to Core Glycolipid of Bacterial Lipopolysaccharides in Experimental Bacteremia

作 者: 俞晓峰; 黄策; 何君; 李云

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出 处: 单克隆抗体通讯 1995年 第11卷 第3-4期 17-21

参考文献:09篇

关键词: 革兰氏阴性菌; 脂多糖; 菌血症; 抗体; 单克隆; 免疫防治

摘要: 以小鼠菌血症模型对抗核心糖脂域McAb(EL1、EL3和3H4)的免疫保护的效应进行了研究。结果表明, (1)3株McAb能显著提高受E. coli攻击小鼠的存活率($P<0.05$); (2)EL3和3H4还分别有降低3LD-50|绿脓杆菌和5LD-50|鼠伤寒沙门氏菌感染小鼠病死率的作用($P<0.05$); (3)EL3与3H4对受5LD-50|E. coli和10LD-50|绿脓杆菌攻击小鼠有一定的协同保护作用; (4)在EL1预防性保护试验中发现, 提前4周注入EL1, 并于攻菌前1周加强一次, EL1可明显提高5LD-50|E. coli J5株攻击小鼠的存活率($P<0.05$)。提示EL3和3H4对细菌感染小鼠具有一定的交叉保护作用。

题名: 抗细菌核心糖脂域McAb对LPS体外诱导细胞释放TNF- α 和IL-6及其mRNA表达的影响

外文名: Effects of Monoclonal Antibodies to Core Glycolipid of Lipopolysaccharides on Production and mRNA Expression of Tumor Necrosis Factor-alpha and Interleukin-6 in vitro

作者: 俞晓峰; 黄策; 彭善云; 凌世淦

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出处: 中华微生物学和免疫学杂志 1996年 第16卷 第5期 363-366

参考文献:14篇

关键词: 脂多糖; 单克隆抗体; 细胞因子; 基因表达

摘要: 用细胞因子活性检测, Northern blot方法, 在体外研究了抗细菌核心糖脂域McAb(EL1、EL3和3H4)对LPS诱导人外周血单核细胞(hPBMC)释放TNF- α 和IL-6及其mRNA表达水平的影响。结果表明, EL1、EL3和3H4在体外有抑制LPS诱导细胞释放TNF- α 和IL-6的作用; Northern blot结果证实, 这3株McAb能分别降低细胞TNF- α 和IL-6 mRNA表达的水平; 提示抗细菌核心糖脂域McAb可能通过与LPS的结合而中和LPS, 从而降低或阻碍了效应细胞炎性细胞因子mRNA的表达, 达到降低相应细胞因子的作用。

题名: 我国散发性戊型肝炎病毒细胞培养分离株的鉴定

外文名: Identification of Sporadic Hepatitis E Virus Isolated by Cell Culture

作者: 苑锡同; 李晓英; 黄如统; 李德荣

地址: 北京 军事医学科学院微生物流行病学研究所 100850

出 处: 解放军医学杂志 1996年 第21卷 第4期 284-285

参考文献: 07篇

关键词: 肝炎病毒, 戊型; 病毒细胞培养; 病毒鉴定; 聚合酶链反应; 核酸杂交

题 名: 大肠杆菌基因工程株在空气和土壤中生物特性的初步研究

外文名: The Preliminary Study on the Biologic Character of the Genetically Engineering Escherichia Coli in Aerosols

作 者: 张松乐; 张朝隆; 陈梅玲; 董咏仪; 李劲松; 车凤翔

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出 处: 解放军预防医学杂志 1995年 第13卷 第6期 440-444

参考文献: 07篇

关键词: 大肠杆菌基因工程株; 微生物气溶胶; 日光辐射; 土壤; 存活

摘 要: 本文应用气溶胶转鼓设备, 观察了大肠杆菌基因工程株 (MM3) 和标准株8099在空气中的稳定性。实验结果表明, 在温度20℃, 相对湿度(RH)60%的条件下, 气溶胶储存60min, MM中和8099的平均存活率比值为0.4:1, t检验, 差别高度显著(P<0.01)。用含有氯霉素的LB琼脂测定MM中在空气中质粒的丢失数量, 未发现质粒丢失。无论在日光总辐射、散射, 还是黑暗环境, 土壤中的工程株都比标准株衰亡快。

题 名: FA-I型多级撞击式空气微生物采样器的简化使用效果观察

外文名: Simplification Effects of Domestic Polystage FA-I Microbial Impinger for Air Sampler

作 者: 张松乐; 陈梅玲; 董咏仪; 张朝隆; 车凤翔

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出 处: 中国卫生检验杂志 1995年 第5卷 第6期 339-341

参考文献: 08篇

题 名: 仔猪腹泻基因工程疫苗在环境中稳定性的初步研究

外文名: Preliminary Study on Stability of Genetically Engineered Live Bacterial Vaccine of Preventing Diarrhoe of Piglets in Environment

作 者: 张松乐; 张朝隆; 陈梅玲; 董咏仪; 李劲松; 车凤翔

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出 处: 中国公共卫生学报 1996年 第15卷 第3期 151-153

参考文献:13篇

关键词: 日光辐射; 大肠杆菌; 基因工程菌; 野生株; 存活

摘要: 观察不同辐射强度的自然光照射下, 对不锈钢表面上的仔猪腹泻基因工程疫苗(MM3)和大肠杆菌野生株(8099)存活的影响。结果表明, 在日光总辐射条件下, 暴露10min, 累积辐射 $0.476\text{MJ}/\text{m}^2$, MM3同8099的存活率比值为1:3.9; 散射条件下, 暴露80min, 累积散射 $0.897\text{MJ}/\text{m}^2$, MM3同8099的存活率比值为1:11.2; 黑暗条件下, 暴露80min, MM3同8099的存活率比值为1:8.0。t检验, 无论日光总辐射、散射还是黑暗环境, 差别都高度显著($P<0.01$)。用含有氯霉素的LB培养基测定日光总辐射对MM3质粒稳定性的影响, 未发现有质粒丢失。

题名: 尖音库蚊复合组(*Culex pipiens* Complex)生物分类学的研究: 表皮碳氢化合物的气相色谱分析

外文名: Biosystematics of culex pipiens complex of china gas chromatographic analysis of cuticular hydrocarbons

作者: 赵彤言; 周方; 陈立苗; 陆宝麟

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出处: 寄生虫与医学昆虫学报 1996年 第3卷 第1期 36-43

参考文献:06篇

关键词: 尖音库蚊复合组; 表皮碳氢化合物; 气相色谱

摘要: 本文报告了我国尖音库蚊复合组尖音库蚊、淡色库蚊和致倦库蚊表皮碳氢化合物的气相色谱分析, 并与本复合组分布于日本的骚扰库蚊以及亲缘种迷走库蚊进行了比较。结果表明, 尖音库蚊、淡色库蚊、致倦库蚊和骚扰库蚊表皮碳氢化合物的主要组分相同, 含量存在着某些差异, 与迷走库蚊相比则有较大的差异, 而在一定程度上表现出复合组的特征。

题名: 中国尖音库蚊复合组(*Culex pipiens* Complex)生物分类学的研究: 幼虫形态特征的数值分析

外文名: Biosystematics of Culex pipiens complex in China-Mathematical analyses of morphological characteristics of larvae

作者: 赵彤言; 陆宝麟

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出处: 寄生虫与医学昆虫学报 1995年 第2卷 第3期 153-160

参考文献:12篇

关键词: 尖音库蚊复合组; 呼吸管指数; 数值; 分析

摘要: 本文报道了 1990年采自我国21个不同地区的尖音库蚊复合组四龄幼虫形态分类的数值分析结果。经过多因素相关与回归分析发现,呼吸管指数与纬度、经度之间存在着正相关的关系,而呼吸管1-S第一对毛分枝数和第二对毛分枝数与纬度、经度之间存在着负相关的关系,并建立了上述分类特征与纬度、经度的多元直线回归方程。另外,综合上述三个分类特征,对典型的尖音库蚊、淡色库蚊和致倦库蚊进行了多元判别和典型变量分析。

题名: 中国尖音库蚊复合组杂交的研究

外文名: Hybridization of *Culex pipiens* complex of China

作者: 赵彤言; 陆宝麟

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出处: 动物分类学报 1996年 第21卷 第2期 218-223

参考文献: 10篇

关键词: 尖音库蚊复合组; 杂交; 生殖隔离; 生物分类学

摘要: 本文对分布在中国的尖音库蚊复合组的尖音库蚊、致倦库蚊和淡色库蚊进行杂交研究,结果表明致倦库蚊与尖音库蚊及淡色库蚊以及后两者杂交可以产生能育的F-1代,它们之间没有传统意义上的生殖隔离,致倦库蚊应为尖音库蚊的一个亚种,而不是如国外有些学者认为的独立种。另外,杂种F-2代成活率很低,这有可能是尖音库蚊(广义)种下分化在遗传学上的反映。

题名: 我国部分地区人群中HDV感染的流行病学调查

作者: 赵秋敏; 周育森; 连振华; 李敬云; 张习坦; 蒋传亮

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出处: 中国公共卫生 1996年 第12卷 第5期 197-198

参考文献: 06篇

关键词: 自然人群; 特殊人群; HDV感染; 抗-HDV; HDVAg

摘要: 对山西、新疆、安徽、上海、天津及北京等地的自然人群和某些特殊人群进行了HDV感染的调查。结果表明,上述地区自然人群感染率为0.4% - 1.1%; 某些特殊人群中HBsAg携带者HDV感染率为7.1% - 11.4%,临床肝炎病人中HDV感染率为9.5% - 10.4%。慢性肝炎患者HDV感染率明显高于急性乙型肝炎患者。血液制品及院内感染是其传播的主要来源。

题 名: 反向乳胶凝集法快速检测肉毒A、B型毒素

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出 处: 中国公共卫生 1996年 第12卷 第1期 33-34

参考文献: 08篇

关键词: 肉毒毒素; 反向乳胶凝集法

摘 要: 采用物理吸附法, 将A、B型肉毒抗体致敏于聚苯乙烯乳胶, 检测肉毒毒素。通过不同实验条件的反复比较实验证明: 制备的乳胶, 可检出A型肉毒类毒素3.1-3.9ng/ml, B型肉毒类毒素7.8ng/ml。反应快速, 几分钟之内肉眼观察显示凝集, 30-60min判断结果。特异性好, 与炭疽保护性抗原、绿脓杆菌外毒素A和葡萄球菌肠毒素(A-D)反应阴性, A、B型肉毒类毒素间基本不出现交叉反应。食物标本不需要特殊处理, 食物成份对检出没有干扰。A、B型肉毒抗体致敏乳胶置4-8℃存放1年, 检出灵敏度和特异性未见降低。

题 名: 中国人庚型肝炎病毒(HGV)部分基因的克隆和cDNA序列测定

作 者: 周育森; 王海涛; 唐时辛; 王竟; 陈薇; 赵秋敏; 张习坦

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出 处: 军事医学科学院院刊 1996年 第20卷 第2期 160

参考文献: 01篇

关键词: 庚型肝炎; cDNA; 克隆; 序列

题 名: 安徽淮北地区人群HCV感染及HCV基因型分布调查

作 者: 周育森; 史建亚; 赵秋敏; 杜兰英; 王发银; 张习坦; 王海涛

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出 处: 中国公共卫生 1996年 第12卷 第5期 204-205

参考文献: 09篇

关键词: HCV感染; 自然人群; 抗-HCV; HCV基因型

摘 要: 该地区农村自然人群、煤矿工人和职业献血者中抗-HCV阳性率分别为1.4%、0.5%和4.8%。在HCV感染者中男女之间差别无显著意义。HCV感染者中大多数具有明确的感染途径和来源。经输血和献血及使用血液制品是其主要的感染途径的来源。人群中HCV基因型以II型感染为主, 占63.9%。肝炎病人HCV感染中混合感染所占比例比一般人群和职业献血者的混合感

染比例高。

题 名: 肾综合征出血热病毒呼吸道感染免疫抑制小鼠的研究

外文名: Study of HFRS Virus Aerosol Infection of Respiratory Tract in
Immunosuppressed Mice through Airway

作 者: 周煜: 崔红: 孟令英: 车凤翔

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出 处: 中国公共卫生学报 1996年 第15卷 第5期 267-268

参考文献: 09篇

关键词: 肾综合征出血热病毒: 气溶胶: 呼吸道感染: 免疫抑制小鼠

摘 要: 采用肾综合征出血热 (HFRS) 病毒经呼吸道和腹腔注射感染环磷酰胺免疫抑制的成龄BALB/c小鼠。实验发现HFRS病毒通过两种感染途径均可引起免疫抑制动物发病和死亡, 病毒气溶胶通过呼吸道感染引起动物死亡率为43%, 腹腔注射感染引起的死亡率为61%。该病毒通过呼吸道可以迅速扩散至全身, 从肺洗液巨噬细胞可以分离得到病毒。该结果表明, 呼吸道是HFRS病毒敏感的侵入途径, 在体内的扩散可能是肺巨噬细胞游走携带作用的结果; 对于免疫功能低下的动物, 呼吸道感染可以导致急性致死性感染。

5、本研究所1996年研究或（和）发展的领域有流行性出血热病毒的吸入感染研究，流行性出血热、东西方马脑炎、病毒性肝炎、莱姆病、AIDS病、斑点热、霍乱、土拉弗氏菌、炭疽杆菌、支原体等的诊断，登革热及葡萄球菌肠毒素的生物特性研究，大气微生物的检测，痢疾重组疫苗研究，抗疟药研究，消毒、杀虫、灭鼠药械的研究与发展，医学昆虫的研究。

信任措施“B”：交流关于突发传染病和毒素引起的类似情况资料

(一) 关于突发传染病的背景资料 (每年的病例数目)

疾 病	1996年病例数
鼠 疫	84
霍 乱	3536
病毒性肝炎	707590
痢 疾	746827
伤 寒	59533
流 脑	5730
出 血 热	41855
狂 犬 病	163
钩 体 病	13305
布鲁氏菌病	1888
炭 疽	866
斑 疹 伤寒	2747
乙 型 脑炎	9824
黑 热 病	125
疟 疾	32654
登 革 热	7

注：表内数据为截止到申报时的统计数字

信任措施“D”：积极促进联系

中国鼓励从事与公约直接有关的生物科学家之间的联系、接触与协作研究。1997年在中国将召开如下国际会议。

国际会议（一）

会议名称：国际肝炎及肝病学研讨会

International Symposium on Hepatology

负责安排会议的组织：中国国际科技会议中心

时 间：1997年8月18日-21日

地 点：北京市

会议主要议题：

- 1、病毒性肝炎
- 2、酒精性肝病
- 3、中毒性肝炎
- 4、代谢性肝病
- 5、胆汁郁积性肝病
- 6、肝硬化
- 7、寄生虫性肝病
- 8、肝细胞癌
- 9、胆石症
- 10、肝移植
- 11、中医中药在肝胆疾病中的应用

参加条件：交流研究结果、参加展览、交纳注册费

关于索取进一步资料、办理登记等事项的联络点：

中国国际科技会议中心

联 系 人：方进

电 话：(010) 62575690

国际会议 (二)

会议名称: 第十次国际放线菌生物学大会
10th International Symposium on
Biology of Actinomycetes

负责安排会议的组织: 中国微生物学会

时 间: 1997年5月27日-30日

地 点: 北京市

会议主要议题:

- 1、基因表达
- 2、次生代谢产物的生物化学和生物合成及其遗传调控
- 3、放线菌质粒
- 4、噬菌体
- 5、转座子
- 6、放线菌形态分化
- 7、发育和系统
- 9、放线菌新资源
- 10、生态新发现混合物的寻求
- 11、分枝杆菌及病源性放线菌
- 12、生产菌株的改良等

参加条件: 交流研究结果、交纳注册费

关于索取进一步资料、办理登记等事项的联络点:

中国北京中关村中国科学院微生物所 100080

联 系 人: 程光胜

电 话: (010) 62554677

国际会议 (三)

会议名称: 第一届国际基因治疗研讨会

First International Symposium on
Gene Therapy

负责安排会议的组织: 中国病理生理学会

时 间: 1997年5月6日-9日

地 点: 北京市

会议主要议题:

- 1、基因转导系统
- 2、基因的病毒载体的GMP生产
- 3、肿瘤基因治疗
- 4、非遗传性疾病基因治疗
- 5、遗传性疾病的基因治疗
- 6、在造血干细胞中转导基因的技术
- 7、了解外国对基因治疗的管理法规

参加条件: 交流研究成果、交纳会议注册费

关于索取进一步资料、办理登记等事项的联络点:

中国北京海淀区学院路北京医科大学病理
生理教研室100083

联 系 人: 唐佩弦

电 话: (010) 68222024

国际会议（四）**会议名称：第十四届国际酶工程会议****14th Enzyme Engineering Conference****负责安排会议的组织：中国微生物学会****时 间：1997年10月15日-19日****地 点：北京市****会议主要议题：**

- 1、酶的结构与功能
- 2、酶催化及药物合成
- 3、新型酶制剂的应用
- 4、糖工程
- 5、抗体酶
- 6、核酶及人工酶新设计
- 7、生物传感器
- 8、酶的新技术及反应器

参加条件：提交研究论文、交纳会议注册费**关于索取进一步资料、办理登记等事项的联络点：****北京中关村中国科学院微生物所100080****联 系 人：黎高翔****电 话：(010) 62550183**

CUBA

(24 April 1997)

La Misión Permanente de la República de Cuba ante la Organización de las Naciones Unidas saluda atentamente al Centro para Asuntos de Desarme de la Organización de las Naciones Unidas y en relación con el párrafo operativo primero de la resolución 51/54, titulada " Convención sobre la Prohibición del Desarrollo, la Producción y el Almacenamiento de las Armas Bacteriológicas (Biológicas) y Toxínicas, y sobre su Destrucción", aprobada por la Asamblea General el 10 de diciembre de 1996, tiene a bien trasladar la respuesta de la República de Cuba.

ANEXO DE LA DECLARACION FINAL SOBRE MEDIDAS
DE FOMENTO DE LA CONFIANZA

En la Tercera Conferencia de Examen se convino en que todos los Estados Partes presentarán la siguiente declaración:

1. Formulario de declaración sobre "nada que declarar"
o "nada nuevo que declarar".

<u>Medida</u>	<u>Nada que declarar</u>	<u>Nada nuevo que declarar</u>
A, Parte 1	()	()
A, Parte 2 i)	()	(X)
A, Parte 2 ii)	()	(X)
A, Parte 2 iii)	()	(X)
B i)	()	()
B ii)	()	()
C	()	()
D	()	()
E	()	()
F	()	(X)
G	()	()

(Márquese el o los casilleros apropiados con respecto a cada medida.)

Fecha: 10 de abril de 1997

Estado Parte en la Convención: República de Cuba.

Formulario A, parte 1Intercambio de datos sobre centros y laboratorios de investigación

1. Nombre (s) de la instalación
.....
.....
2. Organización o empresa pública
o privada responsable
.....
3. Ubicación y dirección postal
.....
.....
4. Fuente (s) de financiación de la actividad, con indicación
de si está total o parcialmente financiada por el Ministerio
de Defensa.
.....
.....
.....
5. Número de unidades de contención máxima que hay en el
laboratorio y/o centro de investigación, con indicación de
su tamaño respectivo (m²).
.....
.....
.....
6. Si no existe ninguna unidad de contención máxima, indíquese
el nivel más elevado de protección.
.....
.....
.....
7. Alcance y descripción general de las actividades, con
indicación del tipo o los tipos de microorganismos y/o
toxinas según proceda.
.....
.....
.....

FORMULARIO A, PARTE 1

1. Centro de Investigaciones Científicas de la Defensa Civil.
2. Nada nuevo que declarar.
3. Nada nuevo que declarar.
4. Nada nuevo que declarar.
5. Nada nuevo que declarar.
6. Nada nuevo que declarar.

7. Descripción general de las actividades.

- Diagnóstico e investigación del SIDA y otros retrovirus.
- Investigación para la producción de medios diagnósticos para:
 - a) Retrovirus.
 - b) Tuberculosis.
 - c) Cólera.
 - d) Enfermedad de Aujeszky.
 - e) Brucelosis.
- Validación de la capacidad de inactivación viral de los procesos productivos de Hemoderivados y productos derivados de la placenta.
- Control de calidad de algunos medios de cultivo y hemoderivados.

Descripción del tipo de microorganismos y/o de las toxinas:

- Virus de la Inmunodeficiencia Humana tipos 1 y 2.
- Virus de la Leucemia-Linfoma de células T. (HTLV I y II).
- Legionella sp.
- Vibrio cholerae.
- Brucella abortus.
- Mycobacterium bovis.
- Virus de la pseudorrabia de los cerdos.
- Parvovirus canino.
- Virus de la diarrea viral bovina.
- Herpes simples humano tipo 1.

FORMULARIO A, PARTE 1

1. Centro de Ingeniería Genética y Biotecnología (C.I.G.B).
2. Consejo de Estado de la República de Cuba.
3. Ave. 31 e/190 y 158, Cubanacán.
Apartado Postal 6162
Telefonos: 52-7-218008, 21-8164, 21-6798.
Telex: 51 2330 CUBABIOT.
51 1072 CUBACIB.
Fax: 53-7-21-8070, 336008.

4. Gubernamental, Presupuesto del Estado, algunos fondos de Organizaciones Internacionales.

5. Se detuvo la fase constructiva en que se encontraba el laboratorio de contención máxima BL-4, destinado específicamente al trabajo con animales, con un área de 60,25 m².

Es necesario señalar que esta unidad se encuentra ubicada dentro del laboratorio BL-3, destinado igualmente al trabajo con animales.

El laboratorio BL-4 que había sido destinado para el trabajo investigativo en condiciones de máxima contención y se encontraba en fase constructiva, **se determinó no continuarlo y emplearlo para otras investigaciones que no necesitaran dichas condiciones.**

6. Existencia de unidades de laboratorios de contención BL-3.

En el edificio principal está ubicado un laboratorio de contención BL-3, con un área de 288 m, en funcionamiento.

Existe un laboratorio de contención BL-3 destinado específicamente al trabajo con animales, con un área total de 351 m². Como informamos en el punto anterior 60,25 m² pertenecen a la unidad de máxima contención BL-4 para trabajo con animales incluida dentro del BL-3. 170.22 m² corresponden específicamente al área contención BL-3 y 120,53 m² destinados a áreas de servicios. **La fase de puesta en marcha del laboratorio está detenida.**

7. En el laboratorio de contención BL-3 no se efectúa ninguna investigación que requiera este nivel de contención.

Formulario B i)

Antecedentes sobre brotes de enfermedades infecciosas de las
que se puede informar.

ENFERMEDAD	NUMERO DE CASOS POR AÑO				
	1993	1994	1995	1996	1997
Toxoptera citricidus	153	21	10	41	160
Phyllonicstis citrella	5	21	5	36	78
CTV	35	94	105	125	225
Cólera porcino clásico	25	129	19	257	n/d
Gusano barrenador (Cochliomyia hominivorax)	0	0	157	693	n/d
Brucelosis bovina	232	229	275	297	n/d
Enfermedades de las mucosas (bufalos)	0	0	1	1	n/d
Varroasis	0	0	0	118	n/d
Brotes de Intoxicación Alimentaria	185B 9324C	247B 11112C	272B 8496C	326B 14548C	n/d

LEYENDA: B= brotes
 C= casos
 n/d= datos no disponibles

Se trabajó arduamente en la implantación del Programa de Control del Cólera Porcino lográndose que al finalizar el año, la epizootia que afectó a todo el territorio quedara prácticamente controlada.

Se continúa trabajando en la implantación del Programa de Control del Gusano Barrenador en coordinación con la FAO-OIE.

Se declara presente en el país la Tripanosomiasis afectando solamente a la provincia Gramma.

Apareció en el país el ácaro Varroa Jacobsoni que afecta a las abejas diezmando su producción y población. Se logra limitar su presencia a las provincias La Habana, Matanzas y Cienfuegos. Se aplican tratamientos y programa nacional para su control.

Nota:

En el caso de los tres primeros brotes sobre los que se informa en la Tabla, la estadística comprende el período de 12 meses entre el mes de abril de un año y el mes de abril del año siguiente.

El resto de los datos corresponde al período de 12 meses que media entre el 1 de enero y el 31 de diciembre de cada año.

Formulario B ii)Información sobre los brotes de enfermedades infecciosas y sobre hechos análogos que parecen desviarse de la pauta normal.

1. Fecha en que se ha tomado conocimiento de la existencia del brote.
2. Localización y zona aproximada afectada
3. Tipo de enfermedad/intoxicación.
4. Presunta fuente de la enfermedad/intoxicación
5. Posibles agentes casuales.
6. Características principales de los síntomas
7. Síntomas detallados, cuando proceda
 - respiratorios
 - circulatorios
 - neurológicos/conductuales
 - intestinales
 - dermatológicos
 - nefrológicos
 - otros síntomas
8. Desviaciones de la pauta normal en lo concerniente a
 - tipo
 - evolución
 - lugar de producción
 - momento de producción
 - síntomas
 - características de virulencia
 - características de resistencia a los medicamentos
 - agentes difíciles de diagnosticar
 - presencia de vectores inhabituales
 - otras desviaciones
9. Número aproximado de casos primarios
10. Número total aproximado de casos
11. Número de fallecimientos
12. Desarrollo del brote
13. Medidas adoptadas

Formulario B ii)

1. Los primeros indicios del **Thrips** se tuvieron el 18 de Diciembre de 1996.
2. Fue localizado sobre papa de la variedad diamand de 38 días de sembrada en la Empresa de Cultivos Varios Lenin, Municipio Jovellanos, Provincia de Matanzas. Se reportaron otros focos de menor magnitud de daños en la Unidad de la Sherrit-Greem en el municipio de Máximo Gómez (Matanzas) y en la finca de un campesino a unos 3 Km del poblado de Bolondrón en ambos casos en el cultivo del pimiento.
3. Plaga causada por el organismo **Thrips palmi**.
4. No confirmada hasta el momento, sin embargo existe una relación en tiempo y espacio entre la aparición del **Thrips Palmi** y el lanzamiento de sustancias desconocidas por una aeronave operada por el Departamento de Estado de los Estados Unidos a su paso por el corredor de Girón, el 21 de Octubre del año 1996.
5. Se identificó **Thrips Palmi**, agente exótico para Cuba hasta ese momento, el 14 de Febrero de 1997.
- 6-7. Al inicio sobre las hojas se observa un raspado cercano al nervio el cual se arruga trayendo como consecuencias el cambio de forma en el limbo.

Al haber una alta infestación del insecto el follaje de las plantas da la impresión de estar quemado.

En los frutos (pimiento) se observa el mismo raspado fundamentalmente en la parte superior del fruto cercana al tallo.

8. Aparición en el centro del territorio de la Empresa de Cultivos Varios Lenin del Municipio Jovellanos y su diseminación por toda la empresa en el curso de un mes, afectando a todos los cultivos, incluyendo malezas, excepto en el plátano hasta el momento.

Ha afectado los siguientes cultivos:

Papa, frijol, pimiento, berenjena, pepino, calabazas, tomate, romerillo y bleado.

Aparición inusual en el país, no reportado antes. Aunque se encuentra distribuido en el Caribe, nuestra región oriental, la más cercana a Haití, Jamaica y Puerto Rico, está libre de la plaga hasta el momento, además de no haberse detectado esta cercana a los puertos.

Agente biológico de difícil diagnóstico ya que era desconocido para la mayoría de nuestros especialistas, lo que provocó que mediara alrededor de dos meses desde su detección primaria (18 de Diciembre de 1996, hasta el 14 de Febrero de 1997).

Los insecticidas probados para su control hasta el momento han mostrado poca efectividad debido a baja sensibilidad de la plaga a éstos.

9. Inicialmente fue afectada la papa en la Empresa de Cultivos Varios Lenin lo que se observa el 18 de Diciembre de 1996 como ligera infestación (menos de 5 individuos por hoja) considerado por los especialistas como el foco inicial.
10. Se reportan otros focos de menor magnitud en la propia provincia de Matanzas. En la primera quincena de Enero de 1997 se reportan focos en los Municipios del Sur de la provincia La Habana limítrofes con la provincia de Matanzas. No se detecta el agente en otras provincias del país.
11. No procede.
12. Fue descrito anteriormente.
13. Puesta en ejecución de un programa de control.
Uso de agroquímicos.
Eliminación de cultivos.
Rastreo de otras regiones del país.
Capacitación de entomólogos y agroquímicos.

4. Medida de fomento de la confianza "C"

Aliento de la publicación de resultados y promoción del empleo de conocimientos

En la Tercera Conferencia de Examen se convino en que los Estados Partes siguiesen poniendo en práctica lo siguiente:

"Fomento de la publicación de los resultados de las investigaciones biológicas relacionadas directamente con la Convención en revistas científicas a disposición general de los Estados Partes, así como promoción del empleo con fines permitidos de los conocimientos obtenidos en esas investigaciones."

Modalidades

En la Tercera Conferencia de Examen se convino en lo siguiente:

1. Se recomienda que los resultados de las investigaciones básicas en las ciencias biológicas, y sobre todo de las directamente relacionadas con la Convención, no se consideren secretos, en general, y que los resultados de las investigaciones aplicadas tampoco se consideren secretos, en la medida de lo posible y sin perjuicio de los intereses nacionales y comerciales.
2. Se alienta a los Estados Partes a que proporcionen información sobre su política en lo que concierne a la publicación de los resultados de las investigaciones biológicas y a que indiquen, entre otras cosas, sus políticas en lo que se refiere a la publicación de los resultados de las investigaciones que sean objeto de intercambio de información conforme a la Sección A, así como a la publicación de los resultados de las investigaciones sobre brotes de enfermedades comprendidas en la Sección B, y a que se proporcionen información sobre las revistas científicas y además publicaciones científicas pertinentes a disposición general de los Estados Partes.
3. La Tercera Conferencia de Examen discutió la cuestión de la cooperación y la asistencia en lo que se refería a la manipulación sin peligro del material biológico objeto de Convención. Llegó a la conclusión de que otros órganos internacionales se ocupaban de esta cuestión y apoyó los esfuerzos destinados a intensificar tal cooperación.

Medidas de fomento de la confianza "C"

Centro de Investigaciones Científicas de la Defensa Civil:

Publicaciones:

1. Sequence Note, complete DNA sequence of the gene Encoding the external glycoprotein (gp 120) from a Cuban HIV type 1 isolate. Carmen E. Gómez, Julio R. Fernández, Enrique Iglesias, Ana E. López, Leonor Lobaina, Enrique Noa, Hector Díaz, Antonieta Herrera, Felipe Rolo and Carlos A. Duarte. AIDS Research an Human Retrovirus 12 (6), 1996.
2. Epitope mapping, V-region DNA sequence, and neutralizing Fab fragments of two monoclonal antibodies against the HIV 1 V3 loop. Carlos A. Duarte, Lincidio Pérez, Javier Vázquez, Marta Dueñas, Olga L. Vilarrubia, Leonor Navea, Rodolfo Valdez, Osvaldo Reyes, Marinieves Montero, Marta Ayala, Jorge Gavilondo. Immunotechnology. 2 (1996) 11-20.
3. Isolation and virological Characterization of HIV-1 in Cuba, Relationship with the clinical status of the patients. L. Lobayna, E. Noa, L. Navea, O.L. Vilarrubia y H.Díaz Biomed Pharmacother 1996, 50:000-000.
4. Envelope V3 Region Sequences of Cuba HIV-1 Isolates. Felipe M. Rolo, Mark H. Wainberg, Zhengxian Gu, Lenor Lobaina, Enrique Noa, Jorge Matos, Francisco Machado and Zonia Martín. Journal of Acquired Immundeficiency Syndromes and Human Retrovirology 9:123-125. 1995.
5. Detección de la infección por VIH mediante la PCR en muestra de sangre seca en papel de filtro. Felipe Rolo Gómez, Jorge Matos, Madelín Blanco, Héctor Díaz, Ana Luisa Lubian. Biotecnología Aplicada 1996, 13:105-108.
6. Evaluación económica del esquema de control externo de la calidad de los laboratorios de diagnóstico del VIH (SIDA). Esther Argote, Tania Carrazana, René Pereira, Grisel López y Regina Zonia Martín. LAB-Acta 1995:7:113-7.
7. El aseguramiento de la calidad en el diagnóstico serológico del VIH. Esther Argote, Regina Zonia Martín, René Pereira, Gilberto Delgado. Normalización No.2.1996.

8. Obtención y evaluación de un suero aglutinante polivalente para la identificación del *Vibrio cholerae* 01.

Marta J. Alfonso, Lázaro Recalado, Nibaldo González, Eugenio Cisneros, Virginia Leyva, María Isabel González. Rev. Cubana Aliment. Nutr. 10(2): 105,110 Jul-Dic 1996.

9. Evaluación del ELISA DAVIH-BRU1 en el diagnóstico serológico de la Brucelosis humana.

Orfelina Rodríguez, Esther Argote, Olga Pérez, Dolores Tabares. Rev. Cub. Med. 34(3):1699-774, 1995.

Instituto de Medicina Veterinaria:

- Se continúa la publicación de los principales logros en materia de Salud animal en la Revista Cubana de Ciencias Veterinarias y en la Revista de Salud Animal.

Facultad de Biología de la Universidad de La Habana.

ARTICULOS PUBLICADOS:

TITULO: Tagging of E 1 candidate vaccine strain by disruption of its hemagglutinin-protease gene with a novel reporter gene: *Clostridium Thermocellum* endoglucanase.
AUTORES: A. Robert, A. Silva, J. Benítez.
REVISTA: A.J.Vaccines (Aceptado para publicar).

TESIS DE LICENCIATURA:

TITULO: Empleo de la electroforesis y de la inmunodifusión doble en la caracterización de bacterias acidófilas.
AUTOR: Liana Reigosa Crespo.
TUTOR: Dra. Orquídea Coto Pérez

TITULO: Purificación de cepas vacunales de virus de la enfermedad de Gumboro.
AUTOR: Waldo Mendiluz Rodríguez.
TUTOR: Lic. Blanca del Rosario Peña.

PONENCIAS PRESENTADAS A EVENTOS CIENTIFICOS:

- TITULO: Empleo de los radioisótopos para el estudio del comportamiento de los pesticidas.
AUTORES: L. Gutiérrez, F.C. Alvarez, J.A. Cruz, N. Tejera.
EVENTO: IX Seminario Latinoamericano y del Caribe de Ciencia y Tecnología de los Alimentos. V Conferencia Internacional sobre Ciencia y Tecnología de los Alimentos (CICTA-5).
CELEBRADO EN : Palacio de las Convenciones.
- TITULO: Importancia de la conservación de microorganismos en la biodiversidad.
AUTORES: A. Prieto, M. Rojas, M. Heydrich, M. López.
EVENTO: X Seminario Científico del INCA.
CELEBRADO EN : INCA, La Habana.
- TITULO: Empleo de biofertilizantes en la agricultura.
AUTORES: A. Prieto.
EVENTO: X Seminario Científico del INCA.
CELEBRADO EN: INCA, La Habana.
- TITULO: Actividad biológica de un oligopeptato.
AUTORES: S. González, E. Diosdado.
EVENTO: XI Fórum de Ciencia y Técnica.
CELEBRADO EN: Universidad de La Habana.
- TITULO: Estudio comparativo entre cepas de *Bacillus thuringiensis* recuperados del campo.
AUTORES: A.R. Casanova, R. Pedrol., T. Díaz.
EVENTO: XI Fórum de Ciencia y Técnica.
CELEBRADO EN : Univesidad de La Habana.
- TITULO: Estudio genético bioquímico en diferentes cepas de *bacillus thuringiensis*.
AUTORES: A.R. Casanova, R. Pedrol, L. Martínez.
EVENTO: XI Fórum de Ciencia y Técnica.
CELEBRADO EN: Universidad de La Habana.
- TITULO: Género *Aspergillus* como contaminante ambiental. Estudio fisiológico.
AUTORES: T. Rojas
EVENTO: XI Fórum de Ciencia y Técnica

TITULO: Genotoxicidad, carcinogénesis, teratogénesis y embriototoxicidad. Reportes encontrados en 25 plantas medicinales.

AUTORES: N. Cápiro, G. Fonseca, D. Calvo.

EVENTO: I Taller Nacional de Mutagenesis, Teratogenesis y Carcinogénesis.

CELEBRADO

EN: CENPALAB, La Habana.

TITULO: Aplicación y utilidad de una batería de ensayos para la evaluación genotóxica de extractos de plantas medicinales.

AUTORES: A.Sánchez, G.Fonseca, N.Cápiro, D.Fernández.

EVENTO: Simposio Internacional de Plantas Medicinales, Ciencia y Homeopatía.

CELEBRADO

EN: Las Yagrumas, La Habana.

TITULO: Toxicidad aguda y subcrónica de un extracto de *P.orbicularis*.

AUTORES: F.Rivera, A.Vidal, T.Lopez, E.Ferrer, M. del C.Sotolongo, M.E. Medina.

EVENTO: VI Congreso de la Sociedad cubana de Ciencias Farmacéuticas.

CELEBRADO

EN: Palacio de la Convenciones, La Habana.

TITULO: Evaluación analgésica y toxicológica del veneno de la abeja *Apis mellifera*.

AUTORES: Y.Rodríguez, A.I.Frías, F.Rivera, A.Vidal, Y.Bellón.

EVENTO: VI Congreso de la Sociedad cubana de Ciencias Farmacéuticas.

CELEBRADO

EN: Palacio de las Convenciones.

TITULO: El género *Aspergillus*. Incidencia como contaminante en diferentes ambientes.

AUTORES: T. Rojas.

EVENTO: III Congreso Latinoamericano de Micología.

CELEBRADO

EN: IFAL, La Habana.

TITULO: *V.cholerae*. Colonization studies using a novel reporter gene: *Clostridium thermocellum* endoglucanase.

AUTORES: A. Silva.

EVENTO: 91 Congress of American Society of Microbiology.

CELEBRADO

EN: E.U.A.

CELEBRADO

EN: Universidad de La Habana.

TITULO: Evaluación de la vigilancia microbiológica de equipos médicos.

AUTORES: N. Rojas.

EVENTO: XI Fórum de Ciencia y Técnica.

CELEBRADO

EN: Universidad de La Habana.

TITULO: Estudio genético y bioquímico integral de virulencia e inmunogenicidad de cepas atenuadas de V. Cholerae.

AUTORES: A. Silva

EVENTO: XI Fórum de Ciencia y Técnica.

CELEBRADO

EN: Universidad de La Habana.

TITULO: Las proteínas y su utilidad en la determinación de la variabilidad genética.

AUTORES: G. Espinosa.

EVENTO: Genética y biotecnología de cultivo de camarón.

CELEBRADO

EN: Facultad de Ciencias Naturales, Universidad de Guayaquil, Ecuador.

TITULO: Conservación de especies.

AUTORES: V. Berovides.

EVENTO: Taller sobre biodiversidad y conservación.

CELEBRADO

EN: Cienfuegos.

TITULO: Ensayo de Drosophila melanogaster.

AUTORES: N. Cápiro.

EVENTO: I Taller Nacional de Mutagénesis, Teratogénesis y Carcinogénesis.

CELEBRADO

EN: CENPALAB, La Habana.

TITULO: Ensayo de micronúcleos.

AUTORES: G. Fonseca

EVENTO: I Taller Nacional de Mutagénesis, Teratogénesis y Carcinogénesis.

CELEBRADO

EN: CENPALAB, La Habana.

TITULO: Utilización de sistemas de ensayos de Drosophila melanogaster.

AUTORES: N. Cápiro, J. Guzmán, A. Remigio.

EVENTO: I Taller Nacional de Mutagénesis, Teratogénesis y Carcinogénesis.

CELEBRADO

EN: CENPALAB, La Habana.

Centro de Ingeniería Genética y Biotecnología:

Las publicaciones de los resultados obtenidos en las diferentes investigaciones biológicas llevadas a cabo en el Centro y que sean objeto de intercambio de información se encuentran ubicadas en revistas como:

- Biotecnología aplicada
- Vaccine
- Veterinary Parasitology
- Journal of Marine Biology and Biotechnology
- Transgenics
- Therigenology
- Molecular Reproduction Development
- Journal of Biotechnology
- Biological Research
- Immunotechnology

FORMULARIO DPromoción activa de los contactos1.-Conferencias, simposios y seminarios internacionales previstos y demás foros análogos de intercambio.

En relación con cada uno de tales acontecimientos, se debe proporcionar la información siguiente:

- Nombre de la Conferencia, etc.
- Entidades organizadoras, etc.
- Fecha de celebración
- Lugar de celebración
- Temas principales de la Conferencia, etc
- Condiciones de participación
- Puntos de contacto para más información, inscripción, etc.

2.-Información relativa a otras oportunidades

FORMULARIO D

PROMOCION ACTIVA DE LOS CONTACTOS

1.- Evento: Biotecnología Habana 97
Aplicaciones Médicas de la Biotecnología

Organizado por: Centro de Ingeniería Genética y Biotecnología
(CIGB).

Centro de Investigaciones Biológicas (CIB)

Fecha: Diciembre 1-6, 1997.

Lugar: CIGB.

Temas principales: Vacunas, Biología molecular, Inmunotecnología y diagnóstico, Anticuerpos monoclonales, Estudios clínicos y estrategias terapéuticas; Estructura de biomoléculas, Producción de biomoléculas, Calidad y control, Biotecnología y desarrollo social.

Puntos de contactos: FAX: 53-7-218070, 336008
E-mail: biot97@cigb.edu.cu

LABIOFAM:**1.-CONFERENCIAS, SIMPOSIOS Y SEMINARIOS INTERNACIONALES PREVISTOS Y DEMAS FOROS ANALOGOS DE INTERCAMBIO.**

- Taller sobre colección de cultivos Instituto Finlay
- Labiofam 96
- Leptospira 96
- Sociedad de microbiología
- Fórum de Ciencia y Tecnología de Bio-materiales
- I Encuentro internacional de Leptospira (Francia)
- Taller de enfermedades hemolíticas del bovino
- II Congreso de toxicología (Nacional)
- I Taller internacional de residuos de medicamentos veterinarios en alimentos
- Congreso de avicultura
- Jornada municipal del Consejo Científico Veterinario (Boyerros)
- XI Fórum de CENPALAB
- XI Fórum de BIOCEM
- I Jornada de inmunología
- Evento de la mujer creadora
- XI Fórum de Ciencia y Técnica
- I Taller sobre transferencia tecnológica de la vacuna anti hepatitis B del CIGB al BIOCEM
- Precongreso de desastres CENSA
- VI Congreso de Micología, IPK
- III Taller de gestores de patentes
- Taller internacional de bioseguridad, IPK
- XXI Convención anual ANECA (Asociación nacional de especialistas de ciencias avícolas de México), 75 TH Western Poultry Disease Conference INPDC, Cancún 1996, abril 30 al 4 de mayo
- Conociendo INTERNET
- Taller internacional de epidemiología 1996, Leptospiras y Rabia, intercambio con biblioteca Facultad de Medicina Veterinaria, México

2.-INFORMACION RELATIVA A OTRAS OPORTUNIDADES

- LABIOFAM 97, 2-3 y 4 de octubre, Ciudad de la Habana
- Taller Gumboro 97, 20 y 21 de marzo, Ciudad de la Habana
- Leptospira 97, 4-5 y 6 de diciembre, Ciudad de la Habana

**Información relativa a otros
eventos preparados por la Empresa de
Laboratorios Farmacéuticos**



TALLER

**GUMBORO
'97**

20 y 21 de Marzo

**Palacio de las Convenciones
Ciudad de La Habana. Cuba.**

PROGRAMA

Taller: " Vacunas y Vacunación en el control de la Enfermedad de Gumboro " 20 y 21 de Marzo de 1997, Palacio de las Convenciones, La Habana. CUBA.

20 / 03 / 97

- 8:30 a 9:00 am Acreditación
- 9:30 am Inauguración. Dr José Antonio Fraga.
Dtor. LABIOFAM.
- 10:00 am Reconocimiento a : Dra. M. Venereo, por primer diagnóstico de la enfermedad de Gumboro.
- 10:20 am Merienda
- 11:00 am Conferencia : " Situación actual en el control y prevención de la Infección de la Bolsa de Fabricio.
Dr. Miguel Marquez Ph. D
(Esp. Mercadotecnia Internacional ANCHOR S.A D.C.V.) México.
- 12:15 pm Discusión
Moderador : Dr. Oscar Viamontes Ph D
- 1:30 pm Almuerzo
Restaurant : " Bucan "
- 3:00 pm Conferencia : Dra. Maritza Tamayo
(Esp. INTERVET) México.
- 4:00 pm Discusión
Moderador : Dra. Julia Noda Ph. D
- 6:00 pm Cóctel de Bienvenida
Hotel " El Palco ", Palacio de las Convenciones.

21 / 03 / 97

- 9:30 am Caracterización de aislamientos de cepas circulantes en Cuba del virus de la Enfermedad de Gumboro.

- LABIOFAM
- CENSA.
- 10:20 am Merienda
- 11:00 am Características de brotes de la Enfermedad de Gumboro en Cuba.
- 12:20 pm Discusión
Moderador : Dr. Aramis Fernández Luciano
Relatores : Dr. Rafael Emilio Polanco Ph. D
Dra. Vivian Fajardo
- 2:00 pm Conclusiones
- 2:30 pm Clausura
- 3:30 pm Almuerzo

La Empresa LABIOFAM lo invita al Taller " Gumboro ' 97 " que se celebrará en Ciudad de la Habana con sede en el Palacio de las Convenciones del 20 al 21 de Marzo de este año.

El taller tiene como objetivo discutir sobre vacunas y vacunación en el control de la " Enfermedad de Gumboro ". El mismo servirá como marco para el intercambio de experiencias entre especialistas nacionales y extranjeros en relación a esta importante patología que afecta significativamente la industria avícola a escala internacional.

Comisión Organizadora

Pte. Com. Org. Lic. Mayra Julia Alfonso.

Miembros :

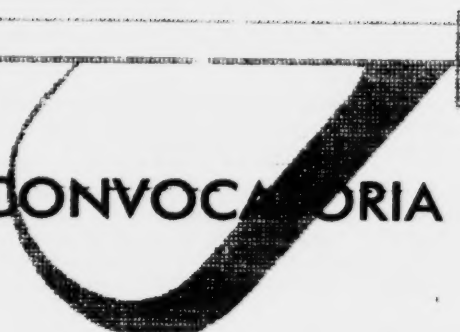
Dra. Dora Rodríguez
Dr. Emilio Fuste
Ing. Mayra Collazo
Ing. Ana Bárbara Linares

Cuota de Inscripción

Nacional : \$ 60 . 00

Incluye :

Credencial, módulo de materiales, certificado de participación, meriendas, almuerzos y cóctel de bienvenida.



CONVOCATORIA

EVENTO CIENTIFICO

97
LEPTOSPIRA

4, 5 y 6 de Diciembre

Empresa de Laboratorios
Biológicos Farmacéuticos
LABIOFAM

Estimado Sr. /a :

El Consejo Científico de la Empresa LABIOFAM, invita a todos los profesionales y personal clínico, epidemiológico y veterinario del país, interesados en intercambiar sobre leptospirosis, al evento Leptospira '97, que se celebrará en nuestra Empresa, productora de medios diagnósticos, vacunas y los medios para el control biológico de los vectores que originan la misma, los días 4, 5 y 6 de Diciembre de 1997.

En dicho evento daremos a conocer los medios con que cuenta Cuba para la detección, tratamiento, profilaxis y control de la leptospira entre otros. Dada su importancia esperamos contar con su presencia y la del personal relacionado con esta actividad.

En espera de su participación, le saluda

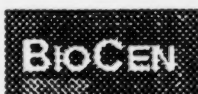
Lic. Dora Rodríguez
Presidenta C. Científico
LABIOFAM

La inscripción podrá realizarse hasta el 5 de Octubre del año en curso, en nuestra Empresa por teléfono o correo electrónico :
Telefax : 33 5748
labiofam@ceniai. cu

Coauspicio : MINSAP
IMV

INFORMACION CORRESPONDIENTE AL III TALLER NACIONAL DE MEDIOS DE
CULTIVO.

Organizado por el Centro Nacional de Biopreparados.



**III TALLER NACIONAL DE
MEDIOS DE CULTIVO**



PROGRAMA

JUNIO 18,19 y 20 de 1997

18 de Junio*Sesión de la mañana*

Presidente: Dra. Marganta Valdés-Dapena Vivanco

Secretario: Ing. Raisa Zhurbenko

8:00-9:00 Acreditación. Instalación de carteles

9:00 - 9:10 Inauguración.

9:10 - 9:30 Seguimiento de la estrategia del desarrollo de productos para microbiología de BioCen (Conferencia)

9:30 - 11:00 Actualización del diagnóstico rápido en microbiología clínica

Parte I. Diagnóstico automatizado. Sistemas de Identificación Rápida (Mesa redonda)

11:00 - 11:15 Receso

11:15 - 1:00 Actualización del diagnóstico rápido en microbiología

Parte II. Sistemas de filtración por membrana. Otros métodos de diagnóstico (Mesa redonda)

1:00 - 2:00 Almuerzo

Sesión de la Tarde

Presidente: Dr. Eugenio Cisneros Despaigne

Secretario: Lic. Alberto Varela

2:00 - 2:45 Epidemiología de las enfermedades causadas por microorganismos en Cuba y América Latina (Conferencia)

2:45-3:30 Actualización del control de la calidad microbiológica de los alimentos (Conferencia de representante de los laboratorios CIENVAR de Venezuela)

3:30 - 3:45 Receso

3:45- 5:00 Discusión de los trabajos en carteles

5:00 Partida de los ómnibus

19 de Junio*Sesión de la mañana*

Presidente: Lic. Albertina Y. Estrada Rodríguez

Secretario: Dr. Honorio Pérez Martínez

8:30 - 10:30 Diseño y desarrollo de medios de cultivo para la producción biotecnológica y biofarmacéutica (Mesa redonda)

10:30 - 10:45 Receso

10:45 - 11:30 Medios Listos para el Uso. Ventajas y experiencias prácticas (Conferencia de representante de QUELAB, Canadá)

11:30 - 12:15 Sistema de Aseguramiento de la Calidad en la Producción de Medios de Cultivo BioCen (Conferencia)

12:15 - 1:00 Aspectos regulatorios para el registro de Medios de Cultivo

1:00 - 2:00 Almuerzo

Sesión de la tarde

- 2:00 - 3:30 Exposición oral y discusión de trabajos
3:30 - 3:45 Receso
3:45 - 4:15 Comportamiento de la demanda de Medios de Cultivo (Conferencia)
4:15 - 5:00 Discusión en el área de carteles. Lanzamiento del Manual de Medios de Cultivo BioCen en disquetes y de video didáctico. Muestra de bases de datos y sistemas computarizados para diagnóstico y aprendizaje adquiridos y desarrollados por BioCen.
5:00 - Partida de los ómnibus

20 de Junio*Sesión de la mañana*

- Presidentes: Dr. Rodolfo Maribona Hernández
Secretario: Ing. Tamara Lobaina Rodríguez
8:30 - 10:30 Experiencia cubana en el desarrollo de medios de cultivo para la micropropagación "in vitro" (Mesa redonda)
10:30 - 10:45 Receso
10:45 - 1:00 Desarrollo y empleo en los medios de cultivo para la micropropagación de plantas de agentes promotores del crecimiento y de antimicrobianos (Mesa redonda)
1:00 - 2:00 Almuerzo

Sesión de la tarde

- 2:00 - 2:45 Desarrollo de un Sistema de Calidad para la producción de vitroplantas en Cuba. (Conferencia)
2:45 - 3:30 Métodos y medios para la conservación de tejidos vegetales (Conferencia)
3:30 - 3:45 Receso
3:45 - 4:15 Presentación oral y discusión de trabajos
4:15 - 5:00 Discusión de los trabajos en carteles
5:00 - Partida de los ómnibus

Paralelamente se exhibirá una muestra de los productos comercializados por BioCen, así como de los nuevos productos en desarrollo, tanto para el diagnóstico microbiológico como para la micropropagación de plantas.

Igualmente, otros centros de investigación-desarrollo podrán mostrar sus productos, previa coordinación con BioCen.

PRESENTACIÓN DE LOS RESÚMENES

Los resúmenes deberán contener:

Título del trabajo, Nombre y Apellidos de los Autores, Centro(s) de Trabajo. Objetivos, Principales Métodos y Resultados. La extensión no debe exceder 1/2 cuartilla de una hoja formato A4.

OBJETIVOS: El tercer Taller Nacional de Medios de Cultivo, tiene como objetivo fundamental divulgar los resultados de la investigación, desarrollo y empleo de medios de cultivo tanto de BioCen, como de otras instituciones científicas y productivas del país.

En esta edición, se dedicarán dos sesiones a los medios de cultivo y las técnicas que generan su empleo en la biotecnología agrícola, dada la relevancia económica, científica y social que han cobrado las técnicas y tecnologías de embriogénesis somática, micropropagación y obtención de la semilla artificial.

TEMÁTICAS: Las temáticas y materias que serán abordadas son:

Rango de medios de cultivo: microbiológicos, para células y tejidos vegetales y animales, industriales para fermentaciones en estado líquido, semisólido o sólido

Diseño y desarrollo a escala de laboratorio, piloto e industrial de medios de cultivo

Empleo de medios de cultivo microbiológicos en el diagnóstico en medicina humana, veterinaria, biología molecular, control de la calidad de alimentos, aguas, cosméticos y otros productos, monitoreo de elementos del medio ambiente

Empleo de los medios para el cultivo de células y tejidos vegetales en la embriogénesis, micropropagación de plantas, producción de semilla artificial (en fermentadores).

INSCRIPCIÓN: La inscripción se realizará a partir del 1ro de Abril y hasta el 10 de Junio. La cuota de inscripción es de 30.00 pesos, e incluye la participación en el evento y la documentación. Las meriendas y almuerzos serán abonados al asistir y serán a razón de 2.00 pesos diarios.

Se garantiza el alojamiento al personal de otras provincias en la Residencia para Técnicos de BioCen, desde el 17 de Junio hasta el 21, incluyendo los desayunos y comidas, los cuales serán igualmente abonados directamente a su llegada, según los precios establecidos en las dietas en moneda nacional.

Los datos para la inscripción serán: Nombres y Apellidos. Centro de Trabajo. Dirección particular y del centro. Teléfono, Fax, Correo electrónico. Título del Trabajo a Presentar. Forma de presentación (oral, cartel). Recursos para la presentación (retroproyector, proyector de diapositivas, diaporama, video y norma, proyector de cine). Estos datos, así como los resúmenes, serán enviados a BioCen por las siguientes vías:

Fax: 33 84 39 ó 81 70 24

Correo electrónico: Investig@biocen.cigb.edu.cu o biocen@ceniai.edu.cu

Correo a la dirección postal: Dr. Claudio Rodríguez, Pte. Comité Organizador Taller M.C., Centro Nacional de Biopreparados, Apartado 6048, Habana 6, La Habana, Cuba

Correo a la dirección en Bejucal: Dr. Claudio Rodríguez, Pte. Comité Organizador Taller M.C., Centro Nacional de Biopreparados, Carretera a Bejucal, Km 1 1/4, Bejucal, La Habana

Otros eventos programados para el 1997 por el Centro Nacional de Biopreparados:

1. TALLER DE ALERGENOS, FEBRERO
2. TALLER INTERNACIONAL DE PROCESAMIENTO ASEPTICO, OCTUBRE.

DOCUMENTACION CORRESPONDIENTE TE AL FORUM CIENTIFICO
INTERNACIONAL LABIOFAM 97

**CONVOCATORIA
CALL FOR PAPERS**

**FORUM CIENTÍFICO
LABIOFAM '97**

**Scientific Forum
LABIOFAM'97**

**Capitolio de La Habana
3, 4 y 5 de octubre de 1997**

October 3, 4 and 5, 1997

Havana

Los Laboratorios Biológicos Farmacéuticos de Cuba (LABIOFAM) le invitan a participar en el FORUM CIENTÍFICO LABIOFAM '97, que se efectuará en la Ciudad de La Habana los días 3, 4 y 5 de octubre de 1997

LABIOFAM tiene más de 30 años de experiencia en la producción y aplicación de medicamentos de uso veterinario, productos biológicos, vacunas virales, bacterianas y plaguicidas biológicos.

TEMÁTICAS

Se abordarán aspectos Químicos, Bioquímicos, Físico-Químicos, Microbiológicos, Tecnológicos y Económicos de los siguientes temas:

- *Producciones biológicas*
 - Vacunas
 - Métodos y medios diagnósticos
 - Hemoderivados
 - Bioplaguicidas
- *Producciones farmacéuticas*
- *Productos naturales y homeopáticos*
- *Aseguramiento de la calidad*
- *Ingeniería*
- *Mercadotecnia*

El evento propiciará el desarrollo de Ruedas de Negocios así como el intercambio de experiencias en

- *Nuevo rodenticida biológico "Biorat"®*
- *Larvicidas biológicos de alta eficiencia "Griselel"® y "Bactivec"® en el control de los vectores de la Malaria y el Dengue*
- *Aplicación de las Normas ISO-9000 en la industria de medicamentos de uso veterinario*

MODALIDADES DE PARTICIPACIÓN EN EL EVENTO

- Ponencias
- Conferencias magistrales
- Posters
- Mesas redondas
- Talleres

Ponencias. resumen escrito a máquina, extensión máxima una cuartilla de 8¹/₂x11 pulgadas; debe incluir nombres y apellidos de los autores, centro de procedencia, país, ponentes, título, objetivos, descripción de los resultados más relevantes y su nivel de aplicación. Se señalará como anexo los medios audiovisuales y técnicos necesarios para la exposición.

Posters. podrán abarcar un área de 0.85x1.00 m y se admitirán hasta tres pancartas.

Usted puede ofrecer o participar en mesas redondas, talleres o conferencias magistrales; anticipando el tiempo requerido y una breve reseña del contenido.

Los idiomas de trabajo del encuentro serán el español y el inglés.

La fecha límite para la presentación de los trabajos será el 30 de junio de 1997, incluyendo los resúmenes.

La cuota de inscripción, que podrá ser abonada en el momento de la acreditación es la siguiente:

Participante	90 USD
Acompañante	60 USD
Estudiantes*	30 USD

*Previo presentación de documentos que así lo acrediten

Esta cuota le dará derecho a:

- Acreditación
 - Documentación
 - Módulo promocional
 - Participación en todas las sesiones de trabajo
 - Coctel de bienvenida y actividad de clausura
- * Participantes nacionales \$60.00 MN

The Pharmaceutical Biological Laboratories of Cuba (LABIOFAM) invite you to participate in the Scientific Forum LABIOFAM'97, that will be held in Havana on October 3, 4 and 5, 1997

LABIOFAM has more than 30 years of experience in the production and application of medicaments of veterinary use, biological products, viral and bacterial vaccines, and biological pesticides

Topics

The fields of Chemistry, Biochemistry, Physical Chemistry, Microbiology, Technology and Economy will be approached especially

- Biological products
 - Vaccines
 - Methods and diagnostic means
 - Hemoderivatives
 - Biopesticides
- Pharmaceutical products
- Natural and homeopathic products
- Insurance of the quality
- Engineering
- Marketing

The Forum will promote the development of Business Rounds and the exchange of experiences on:

- The new biological rodenticide "Biorat"®
- The high efficiency biological larvicides of "Griselel"® and "Bactivec"® for the control of the vectors of Malaria and Dengue.
- Application of the ISO-9000 Norms in the industry of medicaments for veterinary use

Comité Organizador

Dr. María Antonia Álvarez
Presidencia

Dra. María Padraig
Vicepresidencia

Dra. Dora Rodríguez
Consejo Científico

Ing. Zola Pérez
Secretaría Ejecutiva

Ing. Humberto Viera
Logística

Ing. Rita Almeida
Alojamiento

Lic. Norma Hernández
Relaciones Internacionales

Lic. José Collazo
Comunicaciones

Ing. Ana B. Linares
Promoción

Paquete Turístico

Precios públicos por pax, por noche por pax, en USD

	Hoteles	
	Inglaterra	Plaza
Sencilla	54	64
Doble	38	47

Estos precios incluyen

Alojamiento con desayuno, transfer aeropuerto-hotel-aeropuerto, recorrido de ciudad y servicio de guía

Precios pre y post evento por pax, por noche, en USD

	Hoteles	
	Inglaterra	Plaza
Sencilla	47	58
Doble	31	40

Se solicita a los interesados enviar por Fax o Correo electrónico los siguientes datos a la mayor brevedad

Nombre y apellidos

Dirección

Número de fax, correo electrónico y teléfono

Ocupación

Organización a la cual pertenece

Interés de su participación

Ponente

Observador

Organising Committee

Lic. Mayra J. Alfonso Álvarez
Chairwoman

Dra. Maria Fadruga
Deputy Chairwoman

Dra. Dora Rodríguez
Scientific Council

Ing. Zoila Pérez
Executive Secretary

Ing. Humberto Valdés
Logistics

Ing. Rita Almeida
Insurance

Lic. Norma Hernández
International Relationships

Lic. José Collazo
Economics

Ing. Ana B. Linares
Promotion

TOURIST PACKAGE

Public prices by pax for night by pax, in USD

	Hotels	
	Inglaterra	Plaza
Single	54	64
Double	38	47

The price includes lodging and breakfast, airport-hotel-airport transfer, city tour and guide service.

Prices pre and post-event by pax, by night, in USD

	Hotels	
	Inglaterra	Plaza
Single	47	58
Double	31	40

Participants are requested to send by fax or electronic mail the following data as soon as possible:

Names and surnames

Address

Fax, electronic mail and telephone number

Occupation

Filiation

I am interested to participate as

Observer

Lecturer

Participation modalities

- Full papers
- Master conferences
- Posters
- Round tables
- Workshops

Full papers: A typed summary with a maximum extension of a 8 1/2 x 11 inches page is required. It must include names and surnames of the authors, filiation, country, lecturer, title, objective, description of the most relevant results and level of application. Indicate in an annex the required audio-visual media and technical personnel.

Posters: will have an area of 0.85x1.00 m. Three posters will be admitted.

You can offer or participate in round tables, workshops or master conferences. Please state the required time and enclose a short review of the content.

The working languages will be Spanish and English.

The deadline for the presentation of the projects, including the summaries, is June 30 1997.

The registration fee, which will be able to be paid when receiving the credentials is the following:

Participants	90 USD
Accompanying persons	60 USD
Students*	30 USD

*On presentation of the corresponding documents

This fee includes the right to

- Credentials
- Documentation
- Promotional module
- Participation in all the work sessions
- Opening cocktail and closing ceremony

Para obtener más información, diríjase a:
For more information, please contact

Lic. Mayra J. Alfonso Alvarez
Presidenta Comité Organizadora

Empresa de Laboratorios Biológicos Farmacéuticos LABIOFAM
Ave. Independencia km 16 1/2 BoyerosC. La Habana, Cuba
E-mail labiofam@ceniar.cu Fax: 537 335748 / 333703

FORMAS DE LLEGAR A CUBA

Contacte las siguientes agencias de viajes en su país

HOW TO TRAVEL TO CUBA

Contact the following travel agencies in your country

HAVANATUR ARGENTINA (Argentina) Teléfono (541) 3226361/3946179 3946447/3946263 Fax: (541) 3226074 Aysa Gomez	TROPICOTOUR BAYONA (Francia) Teléfono (331) 59590909 Fax: (331) 59257674 Andoni Echeburia
IDEAL TOUR S.A. (Bolivia) Teléfono: (5912) 376607/343443 Fax: (5912) 376607 Esperanza Meave de Bedregal	HAVANATOUR UK (Inglaterra) Telefax: (44171) 4880492 Fernando Fietes
IDEAL TOUR S.A. (Sucesal Sta. Cruz) Teléfono: (5912) 364224/323588 Fax: (5912) 364222	INTERCHANGE (Inglaterra) Teléfono: (44181) 6813613 Fax: (44181) 7600031 Gordon Burnett
EVASION (Brasil) Teléfono: (5511) 2583044 Fax: (5511) 2580212 Adriana Jaraño	CARIBIC VACATIONS LTD (Jamaica) Teléfono: (809) 9528288 Fax: (809) 9520981 Gordon Townsend
CARIBE SOL (Canadá) Teléfono: (514) 5226866/5220358 Fax: (514) 5226858 Milton Llera	SPLENDID TRAVELS S.A. (Peru) Teléfono: (5114) 287587 Fax: (5114) 479988/286747 Dora Herrera
HOLA SUN HOLIDAYS (Canada) Teléfono: (905) 8829445/8820136 Fax: (905) 8825184 Rene Rangel	SPLENDID TRAVELS S.A. (Sucesal Miraflores) Teléfono: (5114) 479988/473574 Oscar Ampudia
GUAMATUR CHILE (Chile) Teléfono: (562) 2330844/2331381/2341106 Fax: (562) 2341276 Rolando Gutiérrez	IDEAL TOURS (Venezuela) Teléfono: (5802) 7930037/7931822 7936902/7935738 7935106/7936130 Fax: (5802) 7828083 Maria Fernanda Catalis
HAVANATUR DE COLOMBIA LTDA Teléfono: (571) 6220883/6226231 Fax: (571) 6226232 Nelson Rios	TAJINO TOURS S.A. DE C.V. (México) Teléfono: (525) 5593907/5593913/5593918 Fax: (525) 5593951 Daisy Diaz
J.M. TOURS (Costa Rica) Teléfono: (506) 2553855 Fax: (506) 2334946 Jose Monge C.	TAJINO TOURS S.A. DE C.V. (Mérida) Teléfono: (5299) 232398 Fax: (5299) 231784 Alberto Martinez Mon
GUAMA S.A. (España) Teléfono: (341) 4112048 Fax: (341) 5843918 Antonio Perez Serpe	TAJINO TOURS S.A. (Veracruz) Teléfono: (5229) 373997/373833/373317 Fax: (5229) 373382 Maria de los A. Morera
HAVANATOUR PARIS (Francia) Teléfono: (331) 44515084 Fax: (331) 42851801 Antonio Vazquez	

INFORMACION CORRESPONDIENTE AL CURSO INTERNACIONAL TEORICO DE
VERANO "LA BIOSEGURIDAD EN LOS LABORATORIOS Y LA LIBERACION DE
ORGANISMOS VIVOS AL MEDIO AMBIENTE".

Organizado por la Facultad de Biología de la Universidad de la
Habana y el Centro Nacional de Seguridad Biológica.

CURSO TEORICO DE VERANO

**La Bioseguridad en los
laboratorios y la liberación de
organismos vivos al
Medio Ambiente.**

**7-18 Julio 1997
Ciudad de La Habana
Cuba**



**Facultad de Biología
Universidad de La Habana**



**CNSB
Centro Nacional de
Seguridad Biológica**

Patrocinado por :

**Facultad de Biología
Universidad de La Habana
y
Centro Nacional de Seguridad Biológica
de la República de Cuba**

Objetivos:

Brindar al egresado universitario y técnico de nivel superior que por su perfil de trabajo esté vinculado de alguna forma con el campo biológico y el medio ambiente, los fundamentos de la bioseguridad, su estructura para su implementación.

TEMA 1: EL RIESGO EN EL LABORATORIO.

- El riesgo biológico como elemento fundamental de la bioseguridad.
- Otros tipos de riesgos en el laboratorio (físicos, químicos y factores humanos)
- Clasificación de los agentes biológicos en grupos de riesgo.

TEMA 2. BIOSEGURIDAD EN EL LABORATORIO.

- Definición. Historia. Principios básicos.
- Organización de la bioseguridad. Estructura, funciones y responsabilidades.
- Elementos de un programa de seguridad en el laboratorio.
- Buenas prácticas de laboratorio. Esterilización y tratamiento de residuales.
- Regulaciones para el embalaje y envío de muestras.

TEMA 3. EL DISEÑO DE LOS LABORATORIOS. EQUIPOS Y SISTEMAS DE SEGURIDAD.

- Clasificación de los laboratorios y su designación.
- El Laboratorio básico
- El laboratorio de contención
- El laboratorio de máxima contención
- Equipos y sistemas de seguridad.
- Procedimiento adecuado para el trabajo con gabinetes
- Comprobación a los equipos y sistemas de seguridad
- Artículos de protección personal

TEMA 4. EPIDEMIOLOGÍA DE LOS ACCIDENTES Y ENFERMEDADES PROFESIONALES.

- Factores energéticos y su estrategia de control
- Medidas propuestas por Haddon para la prevención o limitación de los accidentes de laboratorios y daños.
- Programa de salud ocupacional
- Vigilancia médico sanitaria
- Chequeo médico y atención hospitalaria
- Banco de sueros y vacunación

TEMA 5: DEBATES SOBRE LA PROYECCIÓN DE VIDEOS RELACIONADOS CON LA BIOSEGURIDAD.**TEMA 6: BIOSEGURIDAD POR LA LIBERACIÓN DE ORGANISMOS GENÉTICAMENTE MODIFICADOS AL MEDIO AMBIENTE.****6.1 Conceptos de evaluación y gestión del riesgo biológico**

- definiciones
- componentes de evaluación y gestión del riesgo
- metodología para la evaluación el riesgo
- comités nacionales e institucionales de bioseguridad.

6.2 Plantas transgénicas

- conceptos generales
- uso de plantas transgénicas
- riesgos potenciales por el uso de plantas transgénicas

6.3 Animales transgénicos

- conceptos generales
- riesgos ecológicos asociados con animales transgénicos

6.4 Vacunas. Terapiagénica humana. Consideraciones éticas.

- vacunas tradicionales y recombinantes
- métodos de la terapiagénica
- vigilancia de la terapiagénica
- consideraciones éticas y socioeconómicas

6.5 Microorganismos genéticamente modificados.

- supervivencia de los microorganismos
- monitoreo de los microorganismos transgénicos
- uso de microorganismos transgénicos
- riesgos ecológicos por el uso de microorganismos transgénicos

6.6 Caso estudio

- liberación de semillas de plantas transgénicas
- liberación de plantas transgénicas.
- liberación de microorganismos transgénicos
- discusión

**TEMA 7: BASES DE DATOS SOBRE
BIOSEGURIDAD.**

- necesidad de información para la evaluación del riesgo biológico
- vías de acceso a la información

**TEMA 8: ASPECTOS LEGALES DE LA
BIOSEGURIDAD.****8.1 Documentación legislativa y técnica**

- documentos internacionales técnicos y legalmente vinculantes
- documentos nacionales técnicos y legalmente vinculantes
- otros documentos

8.2 Mesa Redonda

Los participantes presentarán una ponencia sobre como se organiza la bioseguridad en su lugar de procedencia o analizarán alguna problemática específica de su área de trabajo o centro. Se discutirán otros materiales que se entreguen vinculados con los aspectos de la bioseguridad impartidos durante el curso. Por los organizadores se presentará la ponencia sobre la organización de la bioseguridad en el país.

El curso está acreditado por la Universidad de La Habana, de la República de Cuba.

Directores del Curso:

Dr. Mario Cruz Arias

Fac. Biología

Universidad de La Habana

Ing. José Rodríguez Dueñas

Centro Nacional de Seguridad Biológica

Por favor remitir cheque de pago al Banco Financiero Internacional, S.A. a favor de:

Centro Nacional de Seguridad Biológica

Calle 28 No. 502 e/ 7ma y 5ta. Ave., Playa, Ciudad de La Habana, Cuba.

Cuenta Bancaria: 402-01-235 CITMA Ciencia y Tecnología.

Datos del Participante.

Nombre y Apellidos
Fecha de Nacimiento
Nacionalidad
País de Origen
Actividad Profesional que realiza
Dirección profesional y particular
Teléfonos
Fax
Telex
E-mail
Calificación Académica

Los interesados en el curso presentarán su solicitud antes del 15 de Mayo de 1997.

Para el envío de los datos o más información contactar con:

Dr. Mario Cruz Arias
Profesor Auxiliar
Facultad de Biología, Universidad de La Habana
Calle 25 e/ J e I, Ciudad de La Habana
Teléfono: (537) 329241

Ing. José Rodríguez Dueñas
Centro Nacional de Seguridad Biológica
Calle 28 No. 502 e/ 5ta. y 7ma. Ave., Playa, Ciudad de La Habana
Teléfonos: (537) 224601
Fax: (537) 331188, 330852

El Curso está insertado dentro de un Paquete Turístico.

Precio del paquete:

1200 00 USD (Habitación Sencilla)
1100 00 USD (Habitación Doble)

INCLUYE:

- Curso
- Alojamiento 12 noches hotel Kholy (☆☆☆), con M.A.P.
- Transfer Aeropuerto José Martí-hotel, hotel-Aeropuerto
- Transporte en el Curso
- Coctel de despedida
- Visita al Parque Histórico Militar Morro-La Cabaña
- Excursión a las Playas del Este de la Capital y Varadero.
- Visita a la Maqueta de La Habana
- Visita al Casco Histórico de la Habana Vieja

DERECHOS:

- Matrícula en el Curso.
- Materiales del Curso.
- Diploma de participación.
- Participación en las actividades programadas.

Enviar sus cheques antes del 1ro de Junio, e informar día y hora de llegada, número de vuelo y línea aérea

Nosotros trataremos de satisfacer sus intereses de la manera más económica

Nuestro interés:

Fomentar las relaciones con nuestros colegas

INFORMACION CORRESPONDIENTE AL CURSO INTERNACIONAL "LA
BIOSEGURIDAD EN LA MICROBIOLOGIA VETERINARIA."

Organizado por el Consejo Científico Veterinario y el Centro
Nacional de Seguridad Biológica.

La Bioseguridad en la Microbiología Veterinaria

15 - 19 Septiembre 1997
Ciudad de La Habana
Cuba



Consejo Científico
Veterinario
CUBA



CNSB
Centro Nacional de
Seguridad Biológica

Patrocinado por:

Consejo Científico Veterinario
y
Centro Nacional de Seguridad Biológica
de la República de Cuba

Objetivos:

Impartir los principios de la Bioseguridad en la Microbiología Veterinaria, en la manipulación genética y en la liberación al Medio Ambiente

LA BIOSEGURIDAD EN LA MICROBIOLOGIA VETERINARIA

Lunes, 15 Sep.

Apertura**Tema 1: La Bioseguridad en el Laboratorio.****1.1 Los riesgos en el Laboratorio.**

- El riesgo biológico como elemento fundamental de la Bioseguridad
- Otros riesgos en el laboratorio (físicos y químicos)

1.2 Bases para la clasificación de los laboratorios.

- Clasificación de los agentes biológicos en grupos de riesgo
- Clasificación de los laboratorios y su designación
- Buenas prácticas de laboratorio

1.3 El diseño de los laboratorios, Equipos y Sistemas de Seguridad.

- el Laboratorio Básico
- el Laboratorio de Contención
- el Laboratorio de Máxima Contención
- equipos y sistemas de seguridad
- comprobación a los equipos y sistemas de seguridad
- artículos de protección personal

Martes, 16 Sep.

Tema 2: Métodos de la moderna Biotecnología.

- Conceptos generales sobre modificación genética
- Métodos y biología de la transgénesis animal.
- Retrovirus y oncogénesis.
- Técnicas para la obtención de microorganismos genéticamente modificados

Tema 3: La Bioseguridad en la liberación de Organismos Genéticamente Modificados al Medio Ambiente.**3.1 Conceptos de evaluación y gestión del riesgo biológico.**

- Definiciones
- Componentes de la gestión y evaluación del riesgo biológico
- Metodología para la evaluación del riesgo biológico.
- Comités nacionales e instituciones de bioseguridad.

3.2 Animales Transgénicos.

- Conceptos generales
- Riesgos ecológicos por el uso de animales transgénicos

3.3 Microorganismos Genéticamente Modificados.

- Resistencia y supervivencia de los microorganismos transgénicos
- Monitoreo de los microorganismos transgénicos
- Uso de microorganismos transgénicos
- Riesgos ecológicos por el uso de microorganismos transgénicos

Miércoles, 17 Sep.

Tema 3: La Bioseguridad en la liberación de Organismos Genéticamente Modificados al Medio Ambiente.**3.4 Caso Estudio.**

- Liberación de microorganismos transgénicos.
- Liberación de animales transgénicos.
- Discusión.

Tema 4: Bases de Datos sobre Bioseguridad.

- Necesidad de información para la evaluación del riesgo biológico.
- Vías de acceso a la información.

Tema 5: Aspectos Legales de la Bioseguridad.**5.1 Documentación Legislativa y Técnica.**

- Documentos internacionales técnicos y legalmente vinculantes.
- Documentos nacionales técnicos y legalmente vinculantes.
- Otros documentos

Jueves, 18 Sep.

Tema 5: Aspectos Legales de la Bioseguridad.

5.2 Mesa Redonda.

Los participantes presentaran una ponencia sobre la organizacion de la bioseguridad en su lugar de procedencia. Los organizadores presentaran la ponencia sobre la organizacion de la Bioseguridad en Cuba.

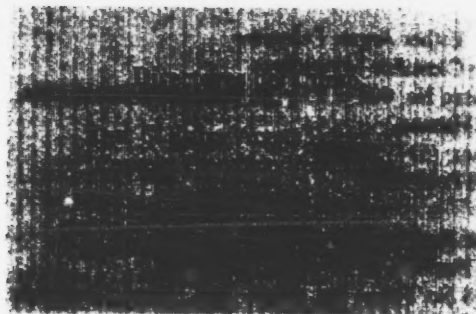
Viernes, 19 Sep.

Cine Debate

Clausura

La duracion del Curso es de 40 horas lectivas

El Curso esta acreditado por el Consejo Cientifico Veterinario de la Republica de Cuba



Por favor remitir cheque de pago al Banco Financiero Internacional, S.A. a favor de:

Centro Nacional de Seguridad Biológica

Calle 28 No. 502 e/ 7ma y 5ta. Ave., Playa, Ciudad de La Habana, Cuba

Cuenta Bancaria: 402-01-235 CITMA Ciencia y Tecnología

Datos del Participante.

Nombre y Apellidos
Fecha de Nacimiento
Nacionalidad
País de Origen
Actividad Profesional que realiza
Dirección profesional y particular
Teléfonos
Fax
Telex
e-mail
Calificación Académica

Los interesados en el curso presentarán su solicitud antes del 15 de Julio de 1997

Para el envío de los datos o más información contactar con:

Dra. C. Esther Argote Pelegrino
Consejo Científico Veterinario
Ave. Paseo No. 604 e/ 25 y 27, Plaza de la Revolución, Ciudad Habana.
Teléfonos: (537) 308064
Fax: (537) 303537

Ing. José Rodríguez Dueñas
Centro Nacional de Seguridad Biológica
Calle 28 No. 502 e/ 5ta. y 7ma. Ave., Playa, Ciudad de La Habana
Teléfonos: (537) 224601
Fax: (537) 331188, 330852

El Curso está insertado dentro de un Paquete Turístico.

Precio del paquete:

750.00 USD (Habitación Sencilla)
700.00 USD (Habitación Doble)

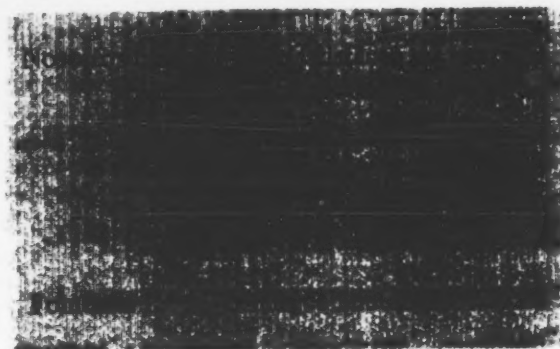
INCLUYE:

- Curso
- Alojamiento 7 noches hotel Kholv (Холь), con M.A.P.
- Transfer Aeropuerto José Martí-hotel-hotel-Aeropuerto
- Transporte en el Curso
- Cóctel de despedida
- Visita al Parque Histórico Militar Morro-La Cabaña
- Excursión a las Playas del Este de la Capital
- Visita a la Maqueta de La Habana

DERECHOS:

- Matrícula en el Curso
- Materiales del Curso
- Diploma de participación
- Participación en las actividades programadas

Los seleccionados al curso enviarán sus cheques antes del 31 de Julio, e informarán día y hora de llegada, número de vuelo y línea aérea



INFORMACIÓN CORRESPONDIENTE AL I TALLER DE ENSAYOS BIOLÓGICOS
organizado por el BIOCEN

**I TALLER DE
ENSAYOS
BIOLOGICOS**



**24 AL 26 DE SEPTIEMBRE DE 1997
LA HABANA, CUBA**

**AUSPICIA:
CENTRO NACIONAL DE BIOPREPARADOS
(BIOCEN)**

COMITE ORGANIZADOR

Presidente:

Dra. Marisely González Soler

Coordinador:

Dr. José Díaz Acosta

Miembros:

Dra. Nora Alfonso López

Dr. Virgilio Bourg

Dra. Rebeca Oliva

Lic. Alicia Terry

Téc. Walter Lorenzo

Téc. Yohanka Tomás

Téc. Miguel Febles

TEMÁTICAS

- Instalaciones y Equipamiento para
Laborio Biológico
- Control e Uso de Biomodelos en:
Ensayos para Control de Proceso y
Fiscal de Biológicos
Ensayos Toxicológicos Preclínicos
Sistema de Garantía de la Calidad
- Alternativas a la Experimentación Animal:
Toxicología
Control de Productos Biológicos
- Ética y Regulación:
Bienestar Animal y Formación de Personal
Regulación y Acreditación Nacional
de Laboratorios
Regulación y Validación de Métodos
Alternativos

CUPON DE INSCRIPCIÓN

Nombre:

Institución:

Dirección:

Teléfono:

Fax:

Título de Presentación:

Preferencia de la Presentación:

☐ Oral ☐ Poster

Fecha Límite: 30 de Julio 1997

Cuota de inscripción \$ 20.00



Recorte la boleta y envíela a:

**I TALLER DE ENSAYOS BIOLOGICOS
CENTRO NACIONAL DE BIOPREPARADOS
(BIOCEN)**

Carretera Beltrán, Km 1½, Bejucal
Provincia La Habana, Cuba.
C.P 6048, Tel: (537) 81-7024/84-7133
Fax: (537) 33-8439
Telex (28) 56 100 BIOCEN CU

PROGRAMA SOCIAL

Miércoles 24

Acreditación y Bienvenida 8:00 a 9:00 p.m.

Todos los días

10:00-10:15 a.m., 15:00-15:15 p.m.

Merienda

12:00-14:00 p.m. Almuerzo

Viernes 26

17:00 p.m. Clausura

La cuota de inscripción incluye:

Sesión de apertura, Sesiones científicas,
Meriendas, Almuerzos, Libro de resúmenes,
Certificado de Participación y Clausura.

Formulario FDeclaración de legislación, reglamentos y otras medidas

<u>Asunto</u>	<u>Leves</u>	<u>Reglamentos</u>	<u>Otras medidas</u>	<u>Introducción de enmiendas desde el año pasado</u>
a) Desarrollo, producción, almacenamiento, adquisición o retención de agentes microbianos u otros agentes biológicos de las toxinas, armas, el equipo y los vectores especificados en el artículo I	Si/No	Si/No	(Si)No	Si/No
b) Exportación de microorganismos* y toxinas	Si/No	Si/No	(Si)No	Si/No
c) Importación de microorganismos* y toxinas	Si/No	Si/No	(Si)No	Si/No

* Microorganismos patogénicos para el hombre, los animales y las plantas, de conformidad con la Convención.

FORMULARIO E

Mediante la Resolución 67/96 de 7 de octubre de 1996, de la Ministra de Ciencia, Tecnología y Medio Ambiente de la República de Cuba, se crea el Centro Nacional de Seguridad Biológica que tendrá como objetivos organizar, dirigir, ejecutar, supervisar y controlar el sistema nacional de seguridad biológica, así como organizar, dirigir y controlar las medidas encaminadas a dar cumplimiento a las obligaciones contraídas por la República de Cuba como parte de instrumentos jurídicos internacionales relacionados con esta materia, incluyendo la Convención de Armas Biológicas.

Se adjunta copia de la citada Resolución, tal y como fué publicada en la Gaceta Oficial de la República de Cuba el 7 de octubre de 1996.

7 de octubre de 1996

GACETA OFICIAL

505

RESOLUCION No. 67/96

POR CUANTO: Por Acuerdo del Consejo de Estado de fecha 21 de abril de 1994, quien resuelve fue designada Ministra de Ciencia, Tecnología y Medio Ambiente.

POR CUANTO: El Acuerdo No. 2817, adoptado por el Comité Ejecutivo del Consejo de Ministros con fecha 28 de noviembre de 1994, aprobó con carácter provisional y hasta tanto sea adoptada la nueva legislación sobre la organización de la Administración Central del Estado, los deberes, atribuciones y funciones de los Organismos de la Administración Central del Estado, así como de sus Jefes, disponiendo en su Apartado SEGUNDO, numeral 19, entre los deberes, atribuciones y funciones de dichos organismos el de desarrollar el perfeccionamiento continuo de las estructuras y formas organizativas de dirección del Organismo, así como en su Apartado TERCERO, numeral 4, entre los deberes, atribuciones y funciones de los titulares de dichos Organismos, la de dictar en el límite de sus facultades y competencia, reglamentos, resoluciones y otras disposiciones de obligatorio cumplimiento para el sistema del Organismo y, en su caso, para los demás Organismos, los Organos Locales del Poder Popular, las entidades estatales, el sector cooperativo, mixto, privado y la población.

POR CUANTO: El Acuerdo No. 2823, adoptado por el Comité Ejecutivo del Consejo de Ministros con fecha 28 de noviembre de 1994, aprobó con carácter provisional y hasta tanto sea adoptada la nueva legislación sobre la organización de la Administración Central del Estado, el objetivo y las atribuciones y funciones específicas del Ministerio de Ciencia, Tecnología y Medio Ambiente, disponiendo en su Apartado SEGUNDO, numeral 9, entre otras, la de dirigir y controlar la ejecución de la política encaminada a garantizar la protección del medio ambiente y el uso racional de los recursos naturales integrada al desarrollo sostenible del país, así como proponer y establecer las estrategias nacionales necesarias para la protección de recursos naturales específicos y de la biodiversidad.

POR CUANTO: La experiencia del trabajo de este Ministerio de Ciencia, Tecnología y Medio Ambiente y el desarrollo de la biotecnología en nuestro país, hacen recomendable en estos momentos la creación de una institución en el sistema de este Organismo, encargada de la organización, ejecución, supervisión y control de las actividades relacionadas con la seguridad biológica por la trascendencia ambiental que tienen dichas actividades, así como de organizar, dirigir y controlar el cumplimiento de los compromisos internacionales contraídos por la República de Cuba en materias relacionadas con esta actividad, en aras de poder contar con estructuras especializadas que permitan el ejercicio de las atribu-

ciones y funciones conferidas a este Ministerio y que se describen en el P. Cuanto anterior.

FOR TANTO: En uso de las facultades que me están conferidas,

Resuelvo:

PRIMERO: Crear el Centro Nacional de Seguridad Biológica adscrito a este Ministerio de Ciencia, Tecnología y Medio Ambiente.

SEGUNDO: El Centro Nacional de Seguridad Biológica tendrá como objetivos el organizar, dirigir, ejecutar, supervisar y controlar el sistema nacional de seguridad biológica, así como organizar, dirigir y controlar las medidas encaminadas a dar cumplimiento a las obligaciones contraídas por la República de Cuba como parte de instrumentos jurídicos internacionales relacionados con esta materia.

Igualmente el Centro Nacional de Seguridad Biológica participará en la elaboración, por el sistema del Ministerio de Ciencia, Tecnología y Medio Ambiente, de las políticas relacionadas con las materias de su competencia.

TERCERO: A los fines del cumplimiento del objetivo encomendado en el Apartado SEGUNDO de la presente, el Centro Nacional de Seguridad Biológica tendrá las atribuciones y funciones siguientes:

1. Organizar, dirigir, ejecutar, supervisar y controlar, según corresponda, el Sistema Nacional de Seguridad Biológica.
2. Participar, de conjunto con los órganos, organismos e instituciones competentes en la regulación y supervisión de las actividades relacionadas con la protección física de los agentes biológicos y tóxicos, así como de los organismos que se liberan al medio ambiente.
3. Elaborar y proponer el programa integral de desarrollo y las líneas de investigación de la Seguridad Biológica, en coordinación con los órganos, organismos e instituciones especializadas competentes.
4. Realizar, en coordinación con los órganos, organismos, entidades e instituciones que corresponda, evaluaciones de riesgos para la salud humana y el medio ambiente en relación con los proyectos de inversiones y otras actividades relacionadas con trabajos con potencial riesgo biológico y proponer las medidas que correspondan en cada caso.
5. Organizar y dirigir las inspecciones a instalaciones biomédicas y biotecnológicas, así como a cualquier instalación que opere con agentes biológicos y a las áreas donde se liberen organismos al medio ambiente, con el fin de verificar las disposiciones y normas establecidas en materia de seguridad biológica.
6. Proponer los instrumentos jurídicos y las normas técnicas que permitan establecer y complementar las medidas para la Seguridad Biológica.
7. Elaborar recomendaciones relativas a la incorporación de estos temas en los planes de estudio de especialistas de nivel medio y superior que por su perfil así lo requieran y promover la especialización y el perfeccionamiento técnico-profesional del personal dedicado a la seguridad biológica.

6. Elaborar recomendaciones relativas a la incorporación de estos temas en los planes de estudio de especialistas de nivel medio y superior que por su perfil así lo requieran y promover la especialización y el perfeccionamiento técnico-profesional del personal dedicado a la seguridad biológica.
8. Realizar la verificación de los sistemas técnicos y equipos de seguridad biológica y a las barreras de contención primaria.
10. Establecer los procedimientos para la contabilidad y el control de los agentes biológicos y tóxicos y de organismos que se liberen al medio ambiente, en coordinación con los órganos, organismos y entidades que corresponda.
11. Organizar y ejecutar los procedimientos para el otorgamiento de licencias a las instalaciones que manipulan agentes biológicos, así como autorizaciones u otro tipo de permisos para las actividades relacionadas con el emplazamiento, diseño y adquisición de las instalaciones y la recepción o envío de los agentes biológicos y tóxicos, así como su destrucción e inutilización, las transferencias relevantes, la investigación o ensayo sobre el terreno y la liberación de organismos al medio ambiente, y otras relacionadas con el cumplimiento de los compromisos contraídos por la República de Cuba en instrumentos jurídicos internacionales sobre estas materias.
12. Establecer la clasificación en grupos de riesgo de los agentes biológicos y tóxicos que afectan al hombre, los animales y las plantas, en coordinación con los órganos, organismos e instituciones que correspondan.

CUARTO: La dirección del Centro estará a cargo de un Director, cuya designación y remoción será de competencia de la Ministra de Ciencia, Tecnología y Medio Ambiente.

QUINTO: Al Centro Nacional de Seguridad Biológica se adscriben cuatro grupos territoriales con sede en las provincias de Santiago de Cuba, Holguín, Camagüey y Villa Clara.

SEXTO: Comuníquese la presente a los interesados y a cuantas otras personas naturales o jurídicas correspondan conocer de su contenido.

SEPTIMO: Se derogan cuantas disposiciones de igual o inferior jerarquía se opongan al cumplimiento de lo dispuesto en la presente la que entrará en vigor a partir de su publicación en la Gaceta Oficial de la República.

DADA en la sede del Ministerio de Ciencia, Tecnología y Medio Ambiente en la ciudad de La Habana, a los quince días del mes de julio de 1996.

Dra. Rosa Elena Simedón Negrín
Ministra de Ciencia, Tecnología y
Medio Ambiente

Formulario GDeclaración de instalaciones de producción de vacunas

1. Nombre de la instalación:
2. Ubicación (dirección postal):
3. Descripción general de los tipos de enfermedades que se combaten:

Formulario G

1. LABIOFAM
2. Ave. Independencia Km 16 1/2. Santiago de las Vegas, Boyeros, Ciudad de La Habana.
3. LABIOFAM produce vacunas bacterianas y virales vivas, atenuadas e inactivadas, para la inmunoprofilaxis de la masa aviar, bovina, porcina, equina, ovino caprina y cunicula, así como para la protección de caninos.

Las vacunas que se producen son destinadas para combatir las enfermedades siguientes:

- Enfermedad de Newcastle
- Viruela aviar
- Encefalomiелitis infecciosa aviar
- Bronquitis infecciosa aviar
- Gumboro o Bursitis infecciosa aviar
- Erisipela porcina
- Peste Porcina Clasica
- Aujeszky
- Salmonelosis
- Pasteurellosis
- Brucelosis (abortus)
- Carbunco sintomatico
- Leptospirosis
- Ectima contagioso
- Icterohemoglobinuria bacilar bobina
- Encefalomiелitis Equina del Este
- Tetanos
- Moquillo canino
- Hepatitis canina
- Encefalomiocarditis

FORMULARIO G

1. Centro de Ingeniería Genética y Biotecnología.
2. Ave. 31 entre 190 y 198, Cubanacán, La Habana, Cuba.
Apartado Postal 6162.
3. Producción de la vacuna humana recombinante contra el virus de la Hepatitis B.

CYPRUS

(30 April 1997)

The Permanent Mission of the Republic of Cyprus to the United Nations presents its compliments to the Secretary-General of the United Nations and has honour to inform that the Republic of Cyprus does not possess, develop, produce or stockpile bacteriological (biological) and/or toxin weapons.

CZECH REPUBLIC

(9 April 1997)

The Permanent Mission of the Czech Republic to the United Nations presents its compliments to the Director of the Centre for Disarmament Affairs, and with the reference to the operative paragraph 3 of the resolution 46/35 A, has the honour to provide information and data requested by the above-said paragraph.

Report by The Czech Republic in accordance with the Final Declarations of the Review Conferences of the Parties to the Convention on the Prohibition of Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

Referring to the Final Declarations of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction in 1991 regarding the implementation of additional confidence building measures, The Czech Republic declares following :

A. Exchange of data on research centres and laboratories :

In The Czech Republic the only laboratories with the highest safety standards are those engaged in :

- the production of biological diagnostics, sera and vaccines
- the diagnosis of highly virulent infectious agents and/or in the study of pathogenesis, immunology, etc. of dangerous infections particularly important in the country.

For individual facilities see the attached Forms 1 :

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐	☒
B (ii)	☐	☒
C	☐	☒
D	☐	☒
E	☐	☒
F	☐	☒
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: February 5, 1997

State Party to the Convention: Czech Republic

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Institute of Medical Biology.....
Laboratory of Genetics.....
2. Responsible public or Medical Faculty of Hygiene.....
private organization Charles University.....
or company.....
3. Location and postal address Šrobárova 50.....
100 42 Prague 10.....
Czech Republic.....
4. Source(s) of financing of the reported activity, including
indication if the activity is wholly or partly financed by the
Ministry of Defence
On contract with the National Institute of Public Health
.....
5. Number of maximum containment units 3/ within the research
centre and/or laboratory, with an indication of their respective
size (m)
The kind of work cannot be classified according to the 1983 WHO
Laboratory Biosafety Manual, no live microorganisms are used
6. If no maximum containment unit, indicate highest level of
protection
.....
7. Scope and general description of activities, including type(s)
of micro-organism and/or toxins as appropriate
Studies of genotoxic effects of very low doses of mykotoxin
aflatoxin B1 in vivo, potential prevention and modification
relationship to carcinogenic activity,.....

-
- 1/ The containment units which are fixed patient treatment
modules, integrated with laboratories, should be identified
separately.
- 2/ For facilities with maximum containment units participating
in the national biological defence research and development
program, please fill in name of facility and mark "Declared
in accordance with Form A, part 2 (iii)".
- 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual,
or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Institute for immunology, Purkyně
Military medical Academy, Hradec
Králové
2. Responsible public or private organization or company Ministry of Defence, Czech Republic
3. Location and postal address 561 66 Těchonín, Czech Republic

4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence
The Institute is wholly financed by the Ministry of Defence
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m²)

6. If no maximum containment unit, indicate highest level of protection
BL-2
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate
To avoid any misunderstanding, we specified the current activities of the facility. Main activities are focused on the study of cellular and molecular regulatory mechanisms of immune response against intracellular pathogens and testing of immunomodulatory substances. Only the model of attenuated strain Francisella tularensis LVS was used for the immunological studies.

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ National Reference Laboratory.....
on HIV/AIDS.....
2. Responsible public or Centre of Epidemiology and Microbiology
private organization National Institute of Public Health
or company.....
3. Location and postal address Šrobárova 48.....
100 42 Prague 10.....
Czech Republic.....
4. Source(s) of financing of the reported activity, including
indication if the activity is wholly or partly financed by the
Ministry of Defence
Ministry of Health of the Czech Republic.....
5. Number of maximum containment units 3/ within the research
centre and/or laboratory, with an indication of their respective
size (m)
Two containment units Risk group III /both - 41 m²/, with two
Biological safety cabinets /class II/.....
6. If no-maximum containment unit, indicate highest level of
protection
see no. 5.....
7. Scope and general description of activities, including type(s)
of micro-organism and/or toxins as appropriate
... Diagnosis and research of HIV infections.....
.....
.....

-
- 1/ The containment units which are fixed patient treatment
modules, integrated with laboratories, should be identified
separately.
 - 2/ For facilities with maximum containment units participating
in the national biological defence research and development
program, please fill in name of facility and mark "Declared
in accordance with Form A, part 2 (iii)".
 - 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual,
or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Dyntec spol. s.r.o.

 2. Responsible public or Private company
 private organization
 or company
 3. Location and postal address Pražská 328
 411 55 Terežín
 Czech Republic

 4. Source(s) of financing of the reported activity, including
 indication if the activity is wholly or partly financed by the
 Ministry of Defence
 Private company

 5. Number of maximum containment units 3/ within the research
 centre and/or laboratory, with an indication of their respective
 size (m)
 180 m²

 6. If no maximum containment unit, indicate highest level of
 protection
 P - 4

 7. Scope and general description of activities, including type(s)
 of micro-organism and/or toxins as appropriate
 Diagnostic activities. Production of microbiological
 diagnostic sets.

-
- 1/ The containment units which are fixed patient treatment
 modules, integrated with laboratories, should be identified
 separately.
 2/ For facilities with maximum containment units participating
 in the national biological defence research and development
 program, please fill in name of facility and mark "Declared
 in accordance with Form A, part 2 (iii)".
 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual,
 or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ SEVAC spol. s.r.o.
Prague
2. Responsible public or private organization or company Private company
3. Location and postal address Korunní 108
101 03 Prague 10
Czech Republic
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence
Privat company
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m)
none
6. If no maximum containment unit, indicate highest level of protection
Containment P3
7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate
Production and research of Vaccines, Sera and Diagnostics for human use. Among others, vaccines and diagnostics for the following agents are produced: Diphtheria toxin, Clostridium tetani, Cl. histolyticum, Cl. perfringens /Welchii/, Cl. oedematiens /Novyii/, Cl. septicum toxins
- 1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
- 2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
- 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ State Veterinary Institute
FMD -Diagnostic Laboratory.....
2. Responsible public or private organization or company Ministry of Agriculture.....
3. Location and postal address Prague 6 - Lysolaje
Sídlištní 156.....
PSČ 156 03.....
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence
Ministry of Agriculture - Wholly.....
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m)
1, 16,1 Sq.m.....
6. If no maximum containment unit, indicate highest level of protection
BL - 4.....
7. Scope and general description of activities, including type(s) of micro-organism and/or toxins as appropriate
LABORATORY FOR THE DIAGNOSTIC OF FOOT/AND/ MOUTH DISEASE AND VESICULAR SWINE DISEASE, NO ROUTINE USE OF LIVE VIRUS, NO BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAM

-
- 1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
 - 2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
 - 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 2 (i)National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

~~Yes~~ ☒ No

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (iii)

National biological defence research and development programme

Description.

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.
2. State the total funding for the programme and its source.
3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

☒ Yes ☐ No
4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?
5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.
6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).
7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form B (i)

Background information on outbreaks of reportable
infectious diseases

Disease	Number of cases per year				
	1994	1995 x	1996	1997	1998
Salmonellosis	10.280	10.680	8.650		
Shigelosis	620	550	245		
Viral Hepatitis A			1.620		
Diarrhea caused by other agents	372	401	305		
Staphyloc. and Clostr. perf. Food Poisoning	583	630	525		
x . Preliminary data					

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

NO REPORT

1. Time of cognizance of the outbreak
2. Location and approximate area affected
3. Type of disease/intoxication
4. Suspected source of disease/intoxication
5. Possible causative agent(s)
6. Main characteristics of systems
7. Detailed symptoms, when applicable
 - respiratory
 - circulatory
 - neurological/behavioural
 - intestinal
 - dermatological
 - nephrological
 - other
8. Deviation(s) from the normal pattern as regards
 - type
 - development
 - place of occurrence
 - time of occurrence
 - symptoms
 - virulence pattern

- drug resistance pattern
- agent(s) difficult to diagnose
- presence of unusual vectors
- other
- 9. Approximate number of primary cases
- 10. Approximate number of total cases
- 11. Number of deaths
- 12. Development of the outbreak
- 13. Measures taken

Form C

Encouragement of publication of results and promotion of use of knowledge .

96401933 Improved method for rapid purification of protein kinase from streptomycetes. Janacek J; Dobrova Z; Moravec V; Naprstek J Institute of Microbiology, Czech Academy of Sciences, Prague, Czech Republic. J Biochem Biophys Methods (NETHERLANDS) Jan 11 1996 31 (1-2) p9-15 ISSN: 0165-022X Language: ENGLISH Document Type: JOURNAL ARTICLE

96381959 [Intravenous administration of Augmentin in the prevention of infectious complications in abdominal hysterectomy] Intravenozni aplikace Augmentinu v profylaxi infekcnich komplikaci u abdominalni hysterektomie. Kucera E; Benesova O Ustav pro peci o matku a dite, Praha. Ceska Gynekol (CZECH REPUBLIC) Jun 1996 61 (3) p148-50 ISSN: 1210-7832 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96381958 [Infectious agents and treatment of infertility with IVF and ET] Infekcni agens a lecba infertility metodou IVF + ET. Dostal J; Oborna I; Talias M; Chrastinova L; Machovska K Centrum asistovane reprodukce 04, Gynek.-porod. klinika FN UP, Olomouc. Ceska Gynekol (CZECH REPUBLIC) Jun 1996 61 (3) p144-7 ISSN: 1210-7832 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96311586 Therapy of Lyme borreliosis in children. Krbkova L; Stanek G J. G. Mendel Children's Hospital, Dept. of Infectious Diseases, Brno, Czech Republic. Infection (GERMANY) Mar-Apr 1996 24 (2) p170-3 ISSN: 0300-8126 Language: ENGLISH Document Type: JOURNAL ARTICLE

96255223 Nystatin-rhodamine B assay for estimating activity of killer toxin from Kluyveromyces lactis. Palkova Z; Vondrej V Department of Genetics and Microbiology, Charles University, Prague, Czech Republic. Methods Mol Biol (UNITED STATES) 1996 53 p325-9 ISSN: 1064-3745 Language: ENGLISH Document Type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

96376829 Staphylococcus saprophyticus subsp. bovis subsp. nov., isolated from bovine nostrils. Hajek V; Meugnier H; Bes M; Brun Y; Fiedler F; Chmela Z; Lasne Y; Fleurette J; Freney J Department of Microbiology, Medical Faculty, Palacky University, Olomouc, Czech Republic. Int J Syst Bacteriol (UNITED STATES) Jul 1996 46 (3) p792-6 ISSN: 0020-7713 Language: ENGLISH Document Type: JOURNAL ARTICLE

96370221 [Detection of chlamydiae in animal and human semen using direct immunofluorescence] Primy prukaz chlamydii v semeni zvirat a lidi imunofluorescenci. Veznik Z; Svecova D; Pospisil L; Diblikova I Veterinary Research Institute, Brno, Czech Republic. Vet Med (Praha) (CZECH REPUBLIC) Jul 1996 41 (7) p201-6 ISSN: 0375-8427 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96354433 [Identification and typing of hospital strains of Acinetobacter calcoaceticus-Acinetobacter baumannii complex] Identifikace a typizace nemocnicnich kmen. ANG. u komplexu Acinetobacter calcoaceticus-Acinetobacter baumannii. Nemec A;

Urbaskova P; Grimont F; Vrankova J; Melter O; Schindler J Statni zdravotni ustav, Praha. Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) May 1996 45 (2) p71-82 ISSN: 0009-5222 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96354432 [Treatment of infectious complications affecting the skin and soft tissues with cefpodoxime proxetil] Leceni infekcnich komplikaci k.ANG.uze s mekkych tkani cefpodoxim proxetilem. Vyhnanek F; Lochmann O Chirurgicka klinika, 3. lekarska fakulta Univerzity Karlovy, Praha. Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) May 1996 45 (2) p68-70 ISSN: 0009-5222 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96354431 [Cytotoxicity and invasive virulence of Yersinia enterocolitis strains in various mammalian cell lines] Cytotoxicita a invazivita virulentnich kmen.ANG.u Yersinia enterocolitica na r.ANG.uznych savcich bunecnych liniich. Danielova V; Holubova J; Sobotkova J Statni zdravotni ustav, Praha. Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) May 1996 45 (2) p59-67 ISSN: 0009-5222 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96354428 [Long-term follow-up of the etiology of diarrhea with emphasis on the role of rotaviruses in hospitalized patients at the Infectious Disease Clinic of the Medical School Hospital in Plzen] Dlouhodobé sledování etiologie pr.ANG.ujm.ANG.u u hospitalizovaných nemocných na Infekční klinice Fakultní nemocnice v Plzni se zaměřením na uplatnění rotavir.ANG.u. Pazdiora P; Taborska J; Bruj J; Kobesova A Ustav epidemiologie, Lekarska fakulta Univerzity Karlovy, Plzen. Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) May 1996 45 (2) p47-51 ISSN: 0009-5222 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96348075 Synthesis of 2'-aminomethyl derivatives of N-(2-(phosphonomethoxy)ethyl) nucleotide analogues as potential antiviral agents. Dvorakova H; Masojidkova M; Holy A; Balzarini J; Andrei G; Snoeck R; De Clercq E Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Praha, Czech Republic. J Med Chem (UNITED STATES) Aug 16 1996 39 (17) p3263-8 ISSN: 0022-2623 Language: ENGLISH Document Type: JOURNAL ARTICLE

96324150 [Keratomycoses] Keratomykozy. Rihova E; Havlikova M; Boguszakova J; Pitrova S I. očni klinika 1. LF UK, Praha. Cesk Slov Oftalmol (CZECHOSLOVAKIA) Jul 1996 52 (3) p164-72 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96237095 Orally administered bacterial lysate Broncho-Vaxom for the treatment of common variable immunodeficiency. Litzman J; Lokaj J; Gerylovova A Inst. Clin. Immunol. Medical Faculty, Masaryk University, Brno, Czech Republic. Allerg Immunol (Paris) (FRANCE) Mar 1996 28 (3) p81-5 ISSN: 0397-9148 Language: ENGLISH Document Type: CLINICAL TRIAL; CONTROLLED CLINICAL TRIAL; JOURNAL ARTICLE

96322356 Ceratomyxa drepanopsettae in the gallbladder of Atlantic halibut, Hippoglossus hippoglossus, from the northwest Atlantic Ocean. Morrison CM; Martell DJ; Leggiadro C; O'Neil D Department of Fisheries and Oceans, Halifax Laboratory, N.S., Canada. Folia Parasitol (Praha) (CZECH REPUBLIC) 1996 43 (1) p20-36 ISSN: 0015- 5683 Language: ENGLISH Document Type:

JOURNAL ARTICLE

96282407 Survival of model bacterial strains and helminth eggs in the course of mesophilic anaerobic digestion of pig slurry. Juris P; Toth F; Laukova A; Plachy P; Dubinsky P; Sokol J Parasitological Institute of the Slovak Academy of Sciences, Kosice, Slovak Republic. Vet Med (Praha) (CZECH REPUBLIC) May 1996 41 (5) p149-53 ISSN: 0375-8427 Language: ENGLISH Document Type: JOURNAL ARTICLE

96268806 A randomized trial of pefloxacin plus klindamicin and cefoxitin in hepatobiliary and pancreatic surgery. Fried M; Peskova M First Surgical Department, Charles University Hospital, Prague, Czech Republic. Hepatogastroenterology (GREECE) Jan-Feb 1996 43 (7) p306-8 ISSN: 0172- 6390 Language: ENGLISH Document Type: CLINICAL TRIAL; JOURNAL ARTICLE; RANDOMIZED CONTROLLED TRIAL

96266686 Myxosporeans infecting the gills of bigmouth buffalo (*Ictiobus bubalus*) in Illinois, USA. Lom J; Cone D Institute of Parasitology, Academy of Sciences of the Czech Republic, Ceske Budejovice, Czech Republic. Folia Parasitol (Praha) (CZECH REPUBLIC) 1996 43 (1) p37-42 ISSN: 0015- 5683 Language: ENGLISH Document Type: JOURNAL ARTICLE

96217145 High-voltage electrophoretic identification of residual antibiotics in milk. Krcmar P; Ruzickova V Veterinary Research Institute, Brno, Czech Republic. Vet Med (Praha) (CZECH REPUBLIC) Mar 1996 41 (3) p93-5 ISSN: 0375-8427 Language: ENGLISH Document Type: JOURNAL ARTICLE

96217126 [Comparison of the results of antibiotics sensitivity tests using the standard microdilution method on isolated bacteria and the direct disc method on positive hemocultures from the automatic BacT/Alert system] Porovnani vysledk. ANG. u testovani citlivosti k antibiotik. ANG. um standardni dilucni mikrometodou u izolovanych bakterii a "primou" diskovou metodou u pozitivnych hemokultur z automatickeho systemu BacT/Alert. Kolar M; Latal T; Kurasova Y; Hajek V Ustav lekarske mikrobiologie, Lekarska fakulta Univerzity Palackeho, Olomouc. Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Mar 1996 45 (1) p30-4 ISSN: 0009-5222 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96217125 [Taxonomy of the genus *Acinetobacter*] Taxonomie rodu *Acinetobacter*. Nemec A Statni zdravotni ustav, Praha. Epidemiol Mikrobiol Imunol (CZECH REPUBLIC) Mar 1996 45 (1) p23-9 ISSN: 0009-5222 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96217078 [Characteristics of multiresistant gram-negative bacteria and their occurrence at the Medical School Hospital in Olomouc] Charakteristika multirezistentnich gramnegativnich bakterii a jejich frekvence ve Fakultni nemocnici v Olomouci. Kolar M; Hejnar P; Hajek V; Koukalova D Ustav lekarske mikrobiologie lekarske fakulty University Palackeho v Olomouci, Ceska republika. kolar@risc.upol.cz Bratisl Lek Listy (SLOVAKIA) Mar 1996 97 (3) p153-8 ISSN: 0006-9248 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96215877 A mechanistic approach to deriving quantitative structure-activity relationship models for microbial degradation of organic compounds. Damborsky J Laboratory of Environmental Microbiology, Faculty of Science, Masaryk University, Brno, Czech Republic. SAR QSAR Environ Res (ENGLAND) 1996 5 (1) p27-36 ISSN: 1062-936X Language: ENGLISH Document Type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

96200125 A deduced *Thermomonospora curvata* protein containing serine/threonine protein kinase and VD-repeat domains. Janda L; Tichy P; Spizek J; Petricek M Institute of Microbiology, Academy of Sciences of the Czech Republic, Prague. J Bacteriol (UNITED STATES) Mar 1996 178 (5) p1487-9 ISSN: 0021-9193 Language: ENGLISH Document Type: JOURNAL ARTICLE

96215387 Macrophage nitric oxide synthase (NOS) activation by *Nocardia opaca* fractions and 15- and 56-kD isolated antigens. Tuckova L; Zidek Z; Hanikyrova M; Cukrowska B; Tlaskalova-Hogenova H; Barot-Ciorbaru R Department of Immunology, Czech Academy of Science, Prague. Clin Exp Immunol (ENGLAND) May 1996 104 (2) p215-20 ISSN: 0009-9104 Language: ENGLISH Document Type: JOURNAL ARTICLE

96205178 [The effect of acidification on *Salmonella enteritidis* in a defined medium] Vliv okyselovani na *Salmonella enteritidis* v definovanem mediu. Ruzickova V Veterinary Research Institute, Brno, Czech Republic. Vet Med (Praha) (CZECH REPUBLIC) Jan 1996 41 (1) p25-31 ISSN: 0375-8427 CZECH Document Type: JOURNAL ARTICLE English Abstract

96205177 [Identification of aerobic and facultatively anaerobic sporulating bacteria isolated during the primary milk collection] Identifikace aerobnich a fakultativne anaerobnich sporulujicich bakterii izolovanych z provovyroby mleka. Vyhnalkova; Lukasova J; Holec J Czech Collection of Microorganisms, Faculty of Science, Masaryk University, Brno, Czech Republic. Vet Med (Praha) (CZECH REPUBLIC) Jan 1996 41 (1) p19-23 ISSN: 0375-8427 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96204695 [Nifuratel and nystatin combination therapy in vulvovaginitis of mixed etiology in children and adolescents] Kombinace nifuratelu s nystatinem v lecbе vulvovaginitid smisene etiologie u deti a dospivajicich. Horejsi J; Uhrova E; Stucbartova M Klinika porodnictvi a gynekologie dospelych a deti 2. LF UK a FN Motol, Praha. Ceska Gynekol (CZECH REPUBLIC) Feb 1996 61 (1) p51-3 ISSN: 1210-7832 Language: CZECH Document Type: JOURNAL ARTICLE

96203184 [The dipeptide L-alanyl-L-glutamine--its preparation and therapeutic use] Dipeptid L-alanyl-L-glutamin--jeho priprava a terapeuticke vyuziti. Veselkova A; Plachy J; Zeman R Vyzkumny ustav antibiotik a biotransformaci, Roztoky u Prahy. Ceska Slov Farm (CZECH REPUBLIC) Feb 1996 45 (1) p14-6 ISSN: 1210-7816 Language: CZECH Document Type: JOURNAL ARTICLE English Abstract

96194882 Mutagenic synergy between paraoxon and plant-activated m-phenylenediamine or 2-acetoxyacetylaminofluorene. Gichner T; Veleminsky J; Wagner ED; Plewa MJ Institute of Experimental Botany, Academy of Sciences of the Czech Republic, Prague. Environ Mol Mutagen

(UNITED STATES) 1996 27 (1) p59-66 ISSN: 0893-6692 Language: ENGLISH Document Type: JOURNAL ARTICLE

96138981 Genomic variability of Staphylococcus aureus and the other coagulase-positive Staphylococcus species estimated by macrorestriction analysis using pulsed-field gel electrophoresis. Pantucek R; Gotz F; Doskar J; Rosypal S Department of Genetics and Molecular Biology, Faculty of Science, Masaryk University, Brno, Czech Republic. Int J Syst Bacteriol (UNITED STATES) Jan 1996 46 (1) p216-22 ISSN: 0020-7713 Language: ENGLISH Document Type: JOURNAL ARTICLE

Form D (i)

Active promotion of contacts1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- | | |
|---|--|
| - name of the conference, etc. | WONCA Region Europe
Prevention In Primary Care
..... |
| - arranging organization(s), etc. | WONCA
..... |
| - time | 30.6. - 4.7.1997
..... |
| - place | Prague, Czech Republic
..... |
| - main subject(s) for the
conference, etc. |
..... |
| - conditions for participation |
..... |
| - point of contact for further
information, registration, etc. |
.....
..... |

2. Information regarding other opportunities

.....
.....
.....

Form D (ij)

Active promotion of contacts1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. 2nd Czech and Slovak Congress on Infectious Diseases.....
- arranging organization(s), etc. Czech Society of Infectology.....
- time 13.-16.5.1997.....
- place Hradec nad Moravicí.....
- main subject(s) for the conference, etc.
- conditions for participation
- point of contact for further information, registration, etc. Secretariat of Congress
Infekční oddělení Slezské nemocnice
Olomoucká 86
746 79 Opava Česká republika..

2. Information regarding other opportunities

Form D (iii)

Active promotion of contacts1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. 3rd Czech Days on Lyme Borreliosis
.....
National Institute of Public Health
- arranging organization(s), etc. Czech Medical Association J.E.Purkyně
.....
- time 27.8. - 29.8.1997
.....
- place Prague, Czech Republic
.....
- main subject(s) for the conference, etc.
.....
- conditions for participation
.....
- point of contact for further information, registration, etc. D. Hulínská, Ph.D., NIPH
Šrobárova 48, 100 42 Prague 10, CZ
.....
.....
.....

2. Information regarding other opportunities

.....
.....
.....

D(iiii)

2. Information regarding other opportunities

- a) name of conference : 14th Pečenka's epidemiological days
arranging organization: Society for epidemiology and microbiology JEP
time: 10.-12.9.1997
place: Olomouc
- b) name of conference : New views in microbiology
arranging organiz. : Czech and Slovak microbiological association
time: 15.-17.4.1997
place: Medlov u Nového Města na Moravě
- c) name of conference : Scientific seminars
arranging organiz. : Society for epidemiology and microbiology JEP
time: 1.4.97 Streptococcal infections
6.5.97 Present and perspectives of vaccination in Czech republic
3.6.97 Epidemiology of selected infections
7.10.97 Pneumocystosis
4.11.97 Problematic Unit of intensive care on infectious departments
2.12.97 Actuality in clinical microbiology
place: Praha

Form E

Declaration of legislation, regulations and other measures

<u>Relating to</u>	<u>Legislation</u>	<u>Regulations</u>	<u>Other measures</u>	<u>Amended since last year</u>
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	~~YES~~ /NO	~~YES~~ /NO	~~YES~~ /NO	~~YES~~ /NO
(b) Exports of micro-organisms* and toxins	~~YES~~ /NO	~~YES~~ /NO	~~YES~~ /NO	~~YES~~ /NO
(c) Imports of micro-organisms* and toxins	~~YES~~ /NO	~~YES~~ /NO	~~YES~~ /NO	~~YES~~ /NO

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

Form F

Declaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party.
2. Past offensive biological research and development programmes:
 - ~~YES~~ - ☒ NO
 - Period(s) of activities
 - Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.
3. Past defensive biological research and development programmes:
 - ☒ YES - ~~NO~~
 - Period(s) of activities 1961 - 1980
 - Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

Research work in the field of Biological Defence Research has always had exclusively defensive character, it has never been concerning the development of offensive biological weapons and was conducted in the following areas: respiratory infections, pathogenesis of some infectious diseases, quick laboratory diagnostic techniques, immunoprophylaxis, chemoprophylaxis, antibioprophyllaxis and therapy, relation between ionization radiation and intoxication, modernization of disinfection means, etc.

DENMARK

(2 April 1997)

The Permanent Mission of Denmark to the United Nations presents its compliments to the Centre for Disarmament Affairs of the United Nations and with reference to Resolution 51/54 entitled: "Convention on the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction", has the honour to enclose the information and data agreed to in the Final Declaration of the Third Review Conference.

20 March 1997

Denmark wishes to confirm that it strictly adheres to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

Denmark maintains no national biological defence research and development programmes and has never been engaged in such activities.

As far as international contacts are concerned, Denmark refers to its reports from previous years to the Centre for Disarmament Affairs, in which Denmark's continuous efforts to share scientific knowledge with the international community are described.

DECLARATION FORM
ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE
FOR USE IN THE INFORMATION EXCHANGE

MEASURE:

A, part 1	Nothing to declare
A, part 2 (i)	Nothing to declare
A, part 2 (ii)	Nothing to declare
A, part 2 (iii)	Nothing to declare
B (i)	Nothing to declare
B (ii)	Nothing to declare
C	Nothing new to declare
D	Nothing new to declare
E	Nothing new to declare
F	Nothing to declare
G	Nothing new to declare

Date: 20 March 1997

State Party to the Convention: DENMARK

FIJI

(14 April 1997)

The Permanent Mission of the Republic of Fiji to the United Nations presents its compliments to the Secretariat of the United Nations and has the honour to refer to the request contained in paragraph 3 of General Assembly resolution 46/35A.

The Permanent Mission of Fiji has the further honour to inform that Fiji does not possess, produce or stockpile bacteriological (biological) or toxin weapons, and as such, has nothing to declare.

FINLAND

(29 April 1997)

The Permanent Mission of Finland to the United Nations presents its compliments to the Centre for Disarmament Affairs of the United Nations and has the honour to transmit herewith the information requested in paragraph 3 of the General Assembly resolution 46/35 A entitled "Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction".

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☐
A, part 2 (i)	☐	☐
A, part 2 (ii)	☐	☐
A, part 2 (iii)	☐	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☒	☐
D	☐	☐
E	☐	☒
F	☒	☐
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: APRIL 15 1997

State Party to the Convention: FINLAND

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ National Test Animal Center
2. Responsible public or private organization or company University of Kuopio
3. Location and postal address P.O.Box 1627
70211 KUOPIO
FINLAND
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence
no military activity
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m²)
50m², B3 (The containment unit is not in use corresponding to its level)
6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate
study of endogenic animal diseases

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 2 (i)National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Yes/No

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

3. Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

(Yes/No)

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (ii) = Description:

1. The objective of the programme is to develop detection methods of biological agents both for laboratory and for field use.

The detection is based on PCR (polymerase chain reaction) and/or immunology (enzyme linked immuno flow assay).

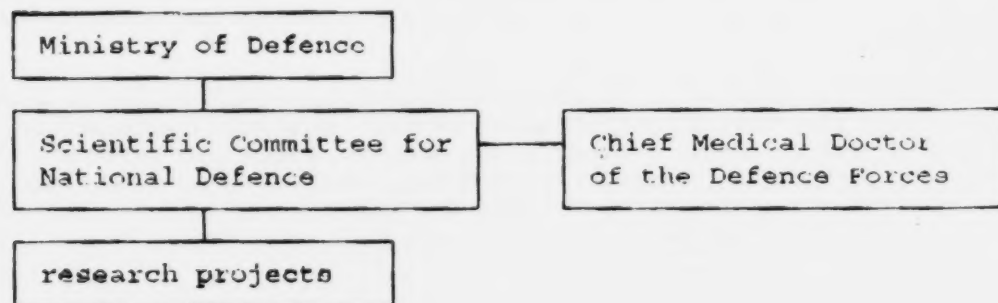
2. Funding is decided only for one year at a time by the Ministry of Defence. The present budget for 1997 is 170 000 FIM (appr. 34 000 USD), covering approximately the salary of one research worker.

3. Yes (University of Kuopio, and the industrial company Enviroonics Ltd).

4. c. 50%.

5. As in paragraph no 1.

- 6.



Form A, part 2 (iii)National biological defence research and development programme

Facilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

Defence Forces Research Centre
NBC-defence laboratory

2. Where is it located (include both address and geographical location)?

- P.O.Box 5, 34111 LAKIALA, Finland
- 25 kilometers northwest from Tampere

3. Floor area of laboratory areas by containment level:

BL2 - _____ (sqM)

BL3 - _____ (sqM)

BL4 - _____ (sqM)

Total laboratory floor area _____ (sqM)

4. The organizational structure of each facility.

Total 14 out of which
3 in BW detection

(i) Total number of personnel

(ii) Division of personnel:

Military

Civilian

(iii) Division of personnel by category:

Scientists

Engineers

Technicians

Administrative and support staff

3

1

1

1

(iv) List the scientific disciplines represented in the scientific/engineering staff.

chemistry and biochemistry

(v) Are contractor staff working in the facility? If so, provide an approximate number.

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Financed by Scientific Committee for National Defence, Ministry of Defence

(vii) What are the funding levels for the following programme areas:

Research

Development

Test and evaluation

170 000 FIM = 34 000 USD (1991)

(viii) Briefly describe the publication policy of the facility:

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

Proceedings of V International Symposium on Protection Against Chemical and Biological Agents Stockholm, Sweden 1995: T. Kuosmanen, A. Tuuvinen, T. Humppl and E. Hakalahto "Luminometric detection methods for salmonella typhi"

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

Development of AM-detection for field use by immunosensor methods.

* Including viruses and prions.

Form A, part 2 (iii)National biological defence research and development programmeFacilities

Complete a form for each facility declared in accordance with paragraph 7 in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

Department of Biochemistry and Biotechnology, University of Kuopio

2. Where is it located (include both address and geographical location)?

P.O.Box 1627, 70211 KUOPIO, Finland

3. Floor area of laboratory areas by containment level:

BL2 _____ (sqM)

BL3 50 _____ (sqM)

BL4 _____ (sqM)

Total laboratory floor area _____ (sqM)

4. The organizational structure of each facility.

(i) Total number of personnel

2 - 3 for BW detection

(ii) Division of personnel:

Military

-

Civilian

2 - 3

(iii) Division of personnel by category:

Scientists

2 - 3

Engineers

Technicians

Administrative and support staff

(iv) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology, Biotechnology

(v) Are contractor staff working in the facility? If so, provide an approximate number.

1 - 2

(vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Financed by Scientific Committee for National Defence, Ministry of Defence

(vii) What are the funding levels for the following programme areas:

Research

50 000 FIM = 11 000 USD

Development

Test and evaluation

(viii) Briefly describe the publication policy of the facility:

Research results publications may be restricted for reasons of proprietary rights of product development.

(ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

A Luminometric detection method for Salmonella Typhi: V International Symposium on Protection against Chemical and Biological Warfare Agents, Stockholm, Sweden 1995

5. Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

Detection of B. agents (e.g. Salmonella typhi, B. anthracis B. tularensis) by PCR-method and immunological methods.

* Including viruses and prions.

Form B (i)

Background information on outbreaks of reportable infectious diseases

[illegible]

* data as 7.4.1997

Form DActive promotion of contactsPlanned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. Symposium on NBC Defence
- arranging organization(s), etc. Defence Forces Research Centre
- time 10 - 12 June, 1997
- place Hyvinkää, Finland
- main subject(s) for the conference, etc. NBC-threats, arms control, ...
- rescue and protection, training
- conditions for participation open
-
- point of contact for further information, registration, etc. Ritva Kettunen, Kristiina Nevanpää
- telephone + 358-3-2843349
- + 358-3-2843237

Information regarding other opportunities

.....

.....

.....

FRANCE

(19 May 1997)

La Mission permanente de la France auprès des Nations Unies présente ses compliments au Secrétariat de l'Organisation des Nations Unies et a l'honneur de lui transmettre ci-joint les informations fournies par la France, au titre de 1997, en application des mesures de confiance adoptées dans la déclaration finale de la 3ème Conférence d'examen de la Convention sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques (biologiques) ou à toxines et sur leur destruction (résolution 51/54 du 10 décembre 1996)./.

Mesure	Rien à déclarer	Rien de nouveau à déclarer
A, partie 1	☐	☒
A, partie 2 i)	☐	☒
A, partie 2 ii)	☐	☒
A, partie 2 iii)	☐	☒
B i)	☐	☐
B ii)	☒	☐
C	☐	☐
D	☐	☐
E	☐	☒
F	☐	☒
G	☐	☒

(Prière de cocher la(les) case(s) appropriées.)

Date 15 avril 1997

Etat partie à la Convention FRANCE

MESURE B

France/avril 1997

Mesures de confiance

Convention d'interdiction des armes biologiques

Nouveaux cas de maladies transmissibles

	1989	1990	1991	1992	1993	1994	1995	1996
Botulisme	30	15	8	22	10	28	15	10
Brucellose	146	125	136	114	127	178	100	71
Choléra	1	6	7	3	1	0	6	1
Diphtérie	1	6	1	0	0	1	0	0
Fièvre jaune	0	0	0	0	0	0	0	0
Légionellose	93	57	57	66	59	81	55	88
Méningite	513	426	452	442	427	349	310	366
Paludisme autochtone	2	2	0	0	8	9	4	2
Peste	0	0	0	0	0	0	0	0
Poliomyélite	2	0	1	0	0	0	1	0
Rage	0	0	0	0	0	0	0	0
SIDA	3 742	3 602	5 084	5 744	6 091	6 151	5 219	5 367
Suette militaire	0	0	0	0	0	0	0	0
Tétanos	63	33	46	55	61	35	26	52
Toxi-infections alimentaires	306	230	212	384	405	486	395	403
Tuberculose	9 027	8 853	8 792	9 010	9 678	9 262	8 568	8 075
Typhoïde	430	320	331	330	261	249	70	206
Typhus récurrent	0	0	0	0	0	0	0	0
Variole	0	0	0	0	0	0	0	0

LES TOXI-INFECTIONS ALIMENTAIRES COLLECTIVES EN FRANCE EN 1995

Source : déclarations obligatoires transmises par les Médecins Inspecteurs de Santé Publique et les Directeurs des Services Vétérinaires. Centre National de Référence des salmonelles et des shigelles

Synthèse réalisée par
S. Haeghebaert, E. Delarocque, Astagneau, V. Vaillant
(Réseau National de Santé Publique)
F. Le Querrec (Direction Générale de l'Alimentation)

La situation en quelques chiffres...

- 395 foyers de TIAC déclarés en 1995, impliquant 7349 malades
- Salmonelles à l'origine de 76% des foyers où l'agent a été identifié
- 5 Entéridis à l'origine de 46% des foyers où l'agent a été identifié
- 52% de foyers en restauration collective
- 13 des foyers attribués à la consommation d'œufs et de produits à base d'œuf

1. Modalités et qualité du système de surveillance

1.1 Objectifs de la déclaration obligatoire

La déclaration des TIAC permet aux Médecins Inspecteurs de Santé Publique et aux Directeurs des Services Vétérinaires (DSV) de réaliser une enquête épidémiologique et environnementale destinée à identifier les aliments responsables et les facteurs favorisants afin de prendre des mesures spécifiques qui empêcheront les récurrences (1).

1.2 Définition de cas

Un foyer de TIAC est défini par l'apparition d'au moins deux cas groupés similaires, d'une symptomatologie, en général digestive, dont on peut rapporter la cause à une même origine alimentaire.

1.3 Sources de déclaration

Toute TIAC doit faire l'objet d'une déclaration à l'autorité sanitaire (D.D.A.S.S. ou D.S.V.). Cette déclaration est obligatoire : d'une part pour tout docteur en médecine qui en a constaté l'existence, d'autre part, pour le principal occupant, chef de famille ou d'établissement, des locaux où se trouve le malade. En 1995, la source de la déclaration du foyer aux D.D.A.S.S. ou aux D.S.V. a été précisée dans 98% des cas (388/395) : médecins libéraux (25%), médecins hospitaliers (23%), directeurs d'établissement (15%), malades (9%), médecins du travail (2%), autres sources (26%) (préfecture, mairie, presse, distribution, centre anti-poison, laboratoires etc.).

1.4 Sources des données

Les données analysées proviennent de 3 sources différentes :
- les foyers déclarés aux D.D.A.S.S. dans le cadre de la déclaration obligatoire, centralisés au R.N.S.P.;
- les foyers déclarés aux D.S.V. et centralisés à la Direction Générale de l'Alimentation (D.G.A.I.).
Lors de la synthèse, la mise en commun des informations de ces deux sources a été effectuée pour éliminer les doubles déclarations.
- Les foyers signalés par les laboratoires d'analyse médicale au Centre National de Référence (C.N.R.) des salmonelles et des shigelles. Il s'agit de cas groupés de salmonelloses ou de shigelloses dont l'origine alimentaire n'est pas validée.

1.5 Qualité du système de surveillance

1.5.1 Proportion de fiches reçues

En 1995, 332 foyers ont été déclarés par les D.D.A.S.S.; 237 (71%) ont fait l'objet de l'envoi d'une fiche au R.N.S.P. La proportion de fiches de DO transmises au R.N.S.P. (71%) est inférieure à celle de 1994 (85%).

1.5.2 Exhaustivité

L'exhaustivité de la déclaration semble différente selon les départements. En 1995, aucune déclaration n'a été effectuée aux D.D.A.S.S. dans 27 départements et aux D.S.V. dans 39 départements. Après mise en commun des déclarations effectuées auprès des D.D.A.S.S. et des D.S.V., aucun foyer n'a été déclaré dans 12 départements, et plus de 15 foyers ont été déclarés dans 4 départements (Maine et Loire: 20, Vendée: 19, Bouches du Rhône: 19, Nord: 17) (fig 3).

1.5.3 Délai de déclaration

En 1995, 50% des foyers ont été déclarés dans la semaine et 92% dans le mois suivant la TIAC.

2. Principales caractéristiques épidémiologiques

2.1 Evolution du nombre de foyers

En 1995, 622 foyers de salmonelloses et de shigelloses ont été signalés par le C.N.R. 237 TIAC ont été déclarées aux D.D.A.S.S. et 200 aux D.S.V. soit, après élimination de 42 doublons, 395 TIAC déclarées aux D.D.A.S.S. ou D.S.V. Le nombre de foyers déclarés en 1995 est inférieur à celui de 1994 (-41% de foyers signalés par le CNR et -26% de foyers déclarés aux D.D.A.S.S. ou D.S.V.) et revient au niveau des années précédentes (fig 1).

2.2 Agent responsable

L'agent responsable de la TIAC a été identifié dans 61,5% des foyers déclarés aux D.D.A.S.S. ou D.S.V. (tableau 1), proportion sensiblement inférieure à celle des années précédentes (tableau 2). Une salmonelle a été isolée dans 76% des cas et 5 Entéridis dans 46% des cas. L'importance relative des salmonelles et des autres germes est globalement stable depuis 1989 (tableau 2) (fig 2).

2.3 Répartition mensuelle des foyers

Elle met en évidence un nombre plus élevé des foyers à salmonelles pendant l'été (fig 4).

2.4 Gravité des cas

Le taux d'hospitalisation global est de 10%, plus fréquent pour les infections à *B. cereus*. Quatre personnes sont décédées d'infections à salmonelles (tableau 3).

2.5 Taille des foyers

La taille des foyers varie selon le lieu de l'incident (Tableau 4). Le nombre moyen de malades par foyer est de 6 en milieu familial, de 30 en restauration collective et de 12 dans les foyers diffus (Plusieurs collectivités ou familles avec une même source de contamination).

2.6 Lieu de survenue

Les TIAC survenues en restauration collective représentent 53% des foyers dont un quart en milieu scolaire et plus d'un cinquième en restauration commerciale. Elles ont été à l'origine de 85% des malades dont un tiers en milieu scolaire (tableau 5). La majorité des TIAC à salmonelles survient en restauration familiale alors que les foyers à *C. perfringens* et à *S. aureus* sont déclarés essentiellement en restauration collective (fig 5, 6).

2.7 Aliment identifié ou suspecté.

Un aliment a été identifié ou suspecté dans 63% (250/395) des TIAC (tableau 6). Les aliments les plus fréquemment en cause sont les œufs et les produits à base d'œuf pour les TIAC à salmonelles, les fromages et les plats ayant nécessité des manipulations pour les TIAC à *S. aureus* et les plats en sauce pour *C. perfringens*. La proportion de foyers pour lesquels ni l'agent responsable, ni l'aliment n'ont pu être identifiés est la même qu'en 1994 (13%).

2.8 Facteurs ayant contribué à l'incident

Au moins un facteur ayant contribué à l'incident a été identifié dans 71% (142/200) des foyers ayant fait l'objet d'une investigation par les D.S.V. Les erreurs dans le processus de préparation et la contamination de l'équipement représentent les principaux facteurs favorisants identifiés (tableau 7).

3. Commentaires

L'analyse des TIAC déclarées en 1995 montre que des améliorations restent nécessaires au niveau de la déclaration, de l'investigation et de la prévention des TIAC.

L'identification de l'agent responsable est en baisse par rapport aux années antérieures ainsi que la proportion de fiches de déclaration transmises au niveau national (D.G.S., R.N.S.P.). Il faut donc à nouveau souligner la nécessité des investigations en insistant aussi sur le rôle de la microbiologie.

Bien que l'importance relative des salmonelles soit probablement stable depuis 1989, il faut noter que le sérotype n'est connu que dans 84% des foyers à salmonelles.

Si les TIAC à salmonelles sont plus fréquentes en milieu familial qu'en collectivité, on observe que cette bactérie est responsable d'un nombre important de cas en collectivité, soulignant la nécessité de la poursuite de l'effort de prévention au niveau de la restauration collective.

4. Références

- 1 - T.I.A.C. : déclaration, investigation, conduite à tenir. *Journal officiel de la République française* n° 1487 Juin, 1988.

Figure 1 : Evolution du nombre de T.I.A.C. recensées selon la source (Fiches D.O des D.D.A.S.S. ou D.S.V., Nombre de foyers déclarés, C.N.R.) France, 1987-1995

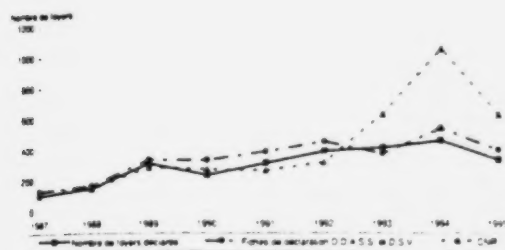


Figure 3 : Evolution de l'importance relative des principaux agents responsables T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1987-1995

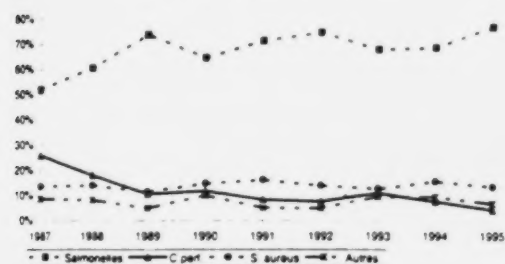


Figure 3 : Nombre de foyers déclarés par département T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1995

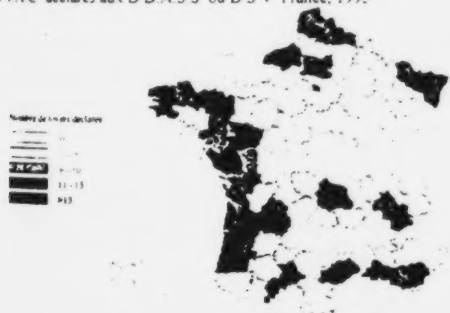


Figure 4 : Répartition mensuelle par type d'agent T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1995

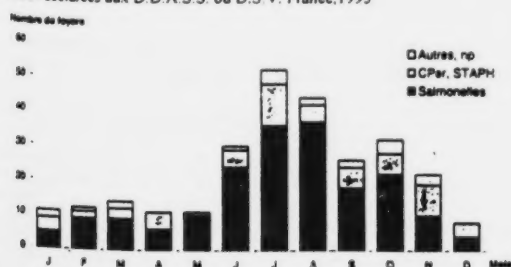


Tableau 1 : Nombre de foyers selon l'agent responsable T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. et foyers de salmonelles et de shigelloses déclarés au C.N.R. France, 1995

Agent causal	Foyers déclarés aux D.D.A.S.S. ou D.S.V.		Foyers signalés au C.N.R.	
	N foyers	%	N foyers	%
<i>Salmonella</i>	185	76.1	3131	69.7
dont :				
Enteritidis	113	61.1	2041	45.4
Typhimurium	29	15.6	626	13.9
Virchow	4	2.2	21	0.4
Hadar	4	2.2	21	0.4
Autres sérotypes *	6	3.2	118	2.6
Sérotype indéterminé	29	15.6	304	6.7
<i>Clostridium perfringens</i>	10	4.1	321	7.1
<i>Staphylococcus aureus</i>	32	17.3	662	14.7
<i>Bacillus cereus</i>	2	1.1	58	1.3
Histamine	5	2.0	114	2.5
Autres †	9	3.7	201	4.5
TOTAL agent déterminé	243		4487	
Agent non déterminé	152		2862	
TOTAL	395		7349	

* Dublin, Heidelberg, Infantis, Paratyphi.
† Yersinia 1, Trichine 2, "Vira" 1, Toxique 1, Dinoflagellés 3, Coli 1, Shigelles 16.
‡ Pour les différents agents : * par rapport au total des agents déterminés.
§ Pour les sérotypes des salmonelles : * par rapport au total des salmonelles.

Tableau 2 : Evolution de la proportion d'identification des agents responsables et de la proportion d'isollements de salmonelles T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1987-1995

annees	Nombre de foyers	% étiologie connue	% * foyers dus aux salmonelles	% * foyers dus à S. Enteritidis
1987	129	63	52	18
1988	164	75	60	27
1989	330	75	73	44
1990	326	74	64	39
1991	384	70	71	47
1992	446	81	74	47
1993	369	80	67	42
1994	533	73	68	44
1995	395	61	76	46

*% parmi les étiologies connues

Tableau 3 : Hospitalisations et décès selon l'agent responsable T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1995

Agent causal	Nombre de cas	Hospitalisations		Décès	
		N	%	N	%
<i>Salmonella</i>	3131	381	12.1	4	0.1
dont :					
Enteritidis	2041	253	12.4	2	0.09
Typhimurium	626	71	11.3	2	0.3
Virchow	21	12	57	0	-
Hadar	21	11	52	0	-
Autres sérotypes *	118	8	6.7	0	-
Sérotype indéterminé	304	26	8.5	0	-
<i>Clostridium perfringens</i>	321	18	5.6	0	-
<i>Staphylococcus aureus</i>	662	102	15.4	0	-
<i>Bacillus cereus</i>	58	13	22.4	0	-
Histamine	114	0	0	0	-
Divers †	201	31	15.4	0	-
Non déterminé	2862	138	4.8	0	-
Total	7349	700	10	4	0.05

* Dublin, Infantis, Heidelberg, Paratyphi.
† Yersinia 1, Trichine 2, "Vira" 1, Toxique 1, Dinoflagellés 3, Coli 1, Shigelles

Figure 5: Nombre de foyers selon le lieu et l'agent responsable. T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. (N=369) France, 1995

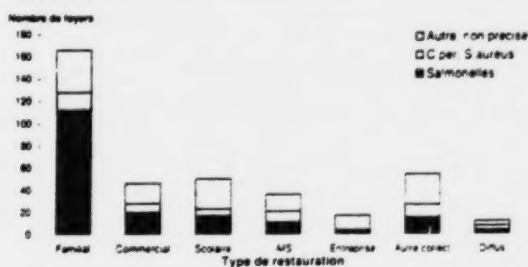


Figure 6: Nombre de malades selon le lieu et l'agent responsable. T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. (N=369) France, 1995

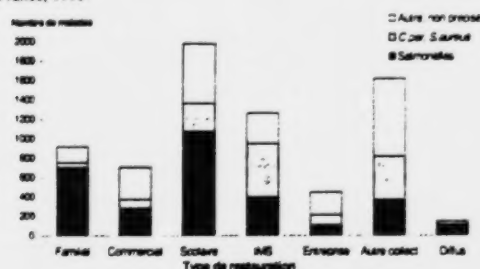


Tableau 4: Taille des foyers selon le type de restauration. T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1995

Taille des foyers	Total (N=394)	Restauration collective	Restauration familiale
2 - 9 malades	242 (61%)	73 (36%)	151 (91%)
10 - 49 malades	112 (29%)	93 (46%)	14 (8%)
50 - 99 malades	27 (7%)	24 (12%)	1 (1%)
≥ 100 malades	13 (3%)	12 (6%)	0 (-)

Tableau 5: Facteurs ayant contribué à l'incident (foyers où au moins un facteur a été identifié. N=142) T.I.A.C. déclarées aux D.S.V. France, 1995

Facteurs	Nombre	%*
Matières premières contaminées	57	40,1
Contamination par l'environnement		
- personnel	46	32,4
- équipement	70	49,3
Erreur dans le processus de préparation	71	50
Délai important entre préparation et consommation	49	34,5
Non-respect des températures réglementaires:		
- chaîne du chaud	19	13,4
- chaîne du froid	63	44,4

* Total > 100%: plusieurs facteurs possibles pour une seule TIAC

Tableau 5: Nombre de foyers et de cas selon l'agent responsable et lieu de contamination. T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1995 (N= 381 types de foyer connus)

Agents / lieu de contamination nb de foyers (nb de malades)	Milieu scolaire	Restaurant d'entreprise	I.M.S.*	Restauration commerciale	Autres collectivités†	Total collectivités	Foyers familiaux	Foyers diffus ‡	Total
<i>Salmonella</i>	17 (1072)	2 (105)	11 (395)	20 (281)	15 (366)	65 (2219)	112 (703)	4 (95)	181 (3017)
dont:									
Enteritidis	13 (949)	1 (5)	6 (187)	8 (136)	10 (212)	38 (1489)	67 (430)	3 (81)	108 (2000)
Typhimurium	4 (123)	0	3 (54)	5 (59)	4 (140)	16 (376)	12 (96)	0	28 (472)
Hadar	0	0	0	0	0	0	4 (21)	0	4 (21)
Virchow	0	0	0	1 (2)	0	1 (2)	2 (5)	1 (14)	4 (21)
Autres sérotypes	0	0	1 (80)	0	0	1 (80)	5 (8)	0	6 (118)
Sérotypes non déterminés	0	1 (100)	1 (74)	6 (84)	1 (14)	9 (272)	22 (113)	0	31 (385)
<i>Clostridium perfringens</i>	2 (41)	1 (100)	7 (507)	3 (67)	6 (157)	19 (866)	1 (6)	0	20 (872)
<i>Staphylococcus aureus</i>	4 (247)	1 (7)	3 (53)	5 (23)	6 (291)	19 (621)	15 (45)	4 (22)	38 (688)
Histamines, autres	5 (92)	3 (62)	2 (44)	4 (70)	4 (111)	18 (379)	3 (22)	1 (11)	22 (412)
Non déterminés	22 (522)	10 (169)	13 (267)	14 (263)	23 (691)	82 (1912)	35 (140)	3 (15)	120 (2067)
Total	50 (1974)	17 (443)	36 (1260)	46 (704)	54 (1616)	203 (5997)	166 (916)	12 (143)	381 (7056)

* Institution médico-sociales: Hôpitaux, maisons de retraite, C.A.T., M.A.S.

† Centres de loisirs, prisons, banquets, etc.

‡ Plusieurs collectivités ou familles avec une même source de contamination

Tableau 6: Agents identifiés et aliments responsables ou suspectés. T.I.A.C. déclarées aux D.D.A.S.S. ou D.S.V. France, 1995.

Aliments	<i>Salmonella</i>				<i>Clostridium perfringens</i>	<i>Staphylococcus aureus</i>	Autres agents	Agents indéterminés	Total
	Enteritidis	Typhimurium	Autres sérotypes	Non sérotypés					
Laits et produits laitiers	0	0	0	0	0	5	0	6	11 (3%)
Oeufs et produits à base d'oeufs *	77	13	2	17	1	4	0	14	128 (32,4%)
Viandes	5	3	0	0	5	2	2	13	30 (7,5%)
Volailles	0	1	4	1	0	0	0	2	8 (2%)
Poissons et fruits de mer	2	0	1	3	0	1	5	16	28 (7%)
Autres aliments †	2	0	1	5	8	5	3	21	45 (11%)
Aliments non retrouvés	27	12	6	8	7	21	13	51	145 (37%)
Total	113 (28%)	29 (7%)	14 (3%)	34 (9%)	21 (5%)	38 (10%)	23 (5%)	123 (31%)	395

* produits à base d'oeufs: mouton au chocolat, autres pâtisseries, mayonnaise, etc.

† Aliments d'origine non animale ou mixte

LE BOTULISME EN FRANCE 1993-1995

Source : déclarations obligatoires transmises par les médecins inspecteurs de Santé Publique
Synthèse réalisée par le Réseau National de Santé Publique (E. Delarocque-Astagneau, A. Infuso)

La situation en quelques chiffres...

- Le nombre de foyers par année est variable, sans tendances évidentes
- 30 foyers déclarés de 1993 à 1995 (62 cas), dont 7 foyers en 1995 (15 cas).
- Trois quarts des cas ont été hospitalisés, 5% ont été ventilés, aucun décès n'a été déclaré
- La toxine isolée est toujours de type B
- La préparation familiale de charcuterie (principalement de jambon) ou de conserve est responsable de la majorité des foyers

L'analyse a porté sur les cas de botulisme survenus entre 1993 et 1995. La comparaison avec les années précédentes (1987-1992) est possible seulement en terme de nombre de foyers déclarés, sans pouvoir discuter les caractéristiques individuelles des cas.

1. Modalités et qualité du système de surveillance

Une seule fiche est utilisée pour déclarer tous les cas liés à la consommation d'un même aliment, ou repas, comme pour les toxicoinfections alimentaires collectives (TIAC).

Dans le cas où un produit commercialisé est suspecté être à l'origine de la contamination, la DDASS doit être alertée dans les plus brefs délais afin de prendre les mesures nécessaires à l'identification et au retrait de la vente ou à la saisie des produits incriminés.

1.1 Objectifs de la déclaration obligatoire

La déclaration permet à la DDASS et à la DSV d'enquêter pour identifier l'aliment responsable, de retirer les restes éventuels d'un aliment de production familiale ou de retirer du commerce un aliment de production industrielle ou artisanale.

1.2 Définition de cas

Un foyer de botulisme est défini par le diagnostic clinique d'un cas isolé ou de plusieurs cas liés à un repas ou un aliment commun. La déclaration peut être envoyée en l'absence de confirmation de laboratoire.

Il est à noter qu'à la différence des TIAC, le diagnostic d'un seul cas doit donner lieu à une déclaration et suffit à définir un foyer.

1.3 Qualité du système de surveillance

1.3.1 Proportion de fiches reçues et respect des critères

Dans la période 1993-1995, 48 foyers ont été déclarés : 30 (62%) questionnaires de déclaration relatifs à ces foyers ont été reçus par la suite à un niveau national ; tous les questionnaires reçus ont été inclus dans l'analyse.

1.3.2 Exhaustivité et représentativité de la déclaration

Une évaluation formelle de l'exhaustivité et la qualité de la DO n'a pas été réalisée.

1.3.3 Délai de déclaration

Seulement 2/30 foyers ont été déclarés dans la semaine suivant le début des signes, 50% dans les 2 semaines, 75% dans les trois semaines, 93 % dans les 4 semaines.

2. Principales caractéristiques épidémiologiques

2.1 Evolution du nombre de foyers

Le nombre de foyers déclarés est resté stable entre 1985 et 1995.

2.2 Taille des foyers

Au total, les 30 foyers déclarés entre 1993 et 1995 incluaient 62 cas. Les trois quarts des foyers déclarés étaient constitués de 1 ou 2 cas. Les deux foyers les plus importants étaient constitués de 6 cas.

2.3 Répartition par âge et sexe

L'âge moyen des cas est de 31 ans. Un seul cas pédiatrique a été déclaré. Le ratio homme/femme est de 1,3.

2.4 Répartition géographique

L'incidence est plus élevée dans les régions du centre de la France (figure 2).

2.5 Confirmation du diagnostic

Le diagnostic a été confirmé par isolement de toxine botulique pour 26 des 30 foyers. La toxine a été isolée dans le sérum des cas pour 16 foyers, dans le sérum et les aliments pour 7 foyers et seulement dans les aliments pour 3 foyers.

La toxine a été identifiée dans 24 foyers ; elle était toujours de type B.

2.6 Pronostic de la maladie

45 cas (73%) ont été hospitalisés ; 3 cas seulement (5%) ont reçu une assistance respiratoire. Aucun cas n'est décédé. La gravité modérée des signes cliniques et l'absence de décès sont en relation avec le type de toxine B qui donne des manifestations cliniques moins sévères que le type A (1).

2.7 Aliment en cause

Un aliment a été suspecté ou identifié dans 29 des 30 foyers. Il s'agit de jambon pour 17 foyers, pâté pour 6 foyers, autre charcuterie pour 2 foyers, conserve de légumes pour 4 foyers.

Les aliments impliqués sont de préparation familiale pour 26 foyers, et commerciale pour 3 foyers (production artisanale dans 2 cas et industrielle dans 1 cas).

3. Investigations

Un foyer de 11 cas (dont 6 déclarés) survenu en 1995 lors d'un repas familial a fait l'objet d'une investigation, le taux d'attaque était de 30%. La toxine n'a pas été isolée dans les aliments et le véhicule suspecté était une préparation de galantine contenant une farce à base de viande de porc préparée par un traiteur.

4. Références

1. Woodruff BA, Griffin PM, McCroskey LM et al. Clinical and laboratory comparison of botulism from toxin A, B and E in the United States, 1975-1988. *J Infect Dis*, 1992, 166 : 1281-6.

Figure 1 : Evolution du nombre de foyers de botulisme déclarés en France de 1987 à 1995.

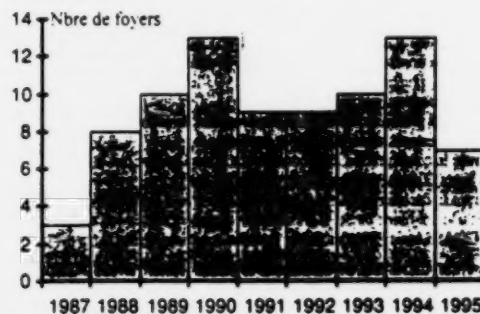
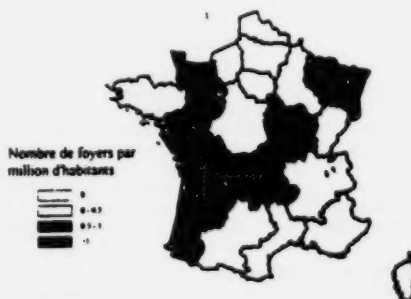


Figure 2 : Foyers de botulisme/million d'habitants/région, France 1993-1995



LA BRUCELLOSE HUMAINE EN FRANCE EN 1995

Source : déclarations obligatoires transmises par les médecins inspecteurs de Santé Publique

Synthèse réalisée par le Réseau National de Santé Publique (Evelyn MAILLOT et Sophie TCHAKAMIAN)

La situation en quelques chiffres...

- Forte tendance à la baisse de l'incidence depuis 1979
- 1995 : 100 cas déclarés (incidence la plus faible depuis 1960)
- Localisation principalement dans le sud-est du pays
- 72% des cas sont de sexe masculin
- 40% des cas exercent une profession à risque (contact avec animaux 20%, contact avec viande 20%)

1. Modalités et qualité du système de surveillance

1.1 Objectifs de la déclaration obligatoire

La déclaration permet de suivre l'évolution de l'incidence, de la répartition géographique et des principales caractéristiques épidémiologiques notamment les facteurs de risque, de la brucellose humaine. Elle permet d'apprécier l'efficacité des recommandations ainsi que des mesures de prophylaxie de la brucellose animale. Elle permet parfois de connaître l'origine de certains foyers.

1.2 Définition de cas

Le critère de déclaration est l'existence de signes de brucellose associés à un isolement de *Brucella* ou une séroconversion.

1.3 Qualité du système de surveillance

En 1995, 100 cas de brucellose humaine ont été déclarés. Parallèlement 70 fiches de déclaration ont été reçues et 69 retenues et analysées.

1.3.1 Proportion de fiches reçues

De 1986 à 1994 la proportion de fiches reçues avait progressivement augmenté passant ainsi de 41% à 77%. Elle est un peu en baisse en 1995 (70%).

1.3.2 Délai d'acheminement des déclarations

Quatre dates étaient disponibles : la date d'apparition des premiers symptômes, la date de confirmation du diagnostic, la date de déclaration par le médecin et la date de réception à la DDASS. En 1995 les délais moyens entre chacune de ces 4 étapes sont :

- entre les premiers signes et la confirmation de laboratoire : moyenne 27 jours, 3 semaines maximum pour 73% des fiches,
- entre la confirmation de laboratoire et la déclaration par le médecin : moyenne 24 jours, 2 semaines maximum pour 70% des fiches,
- entre la déclaration par le médecin et l'arrivée à la DDASS : moyenne 7 jours, soit une moyenne de 58 jours entre les premiers signes et l'arrivée de la fiche à la DDASS avec 70% des fiches dans les 6 semaines (fig 1).

2. Principales caractéristiques épidémiologiques

2.1 Confirmation du diagnostic

En 1995, parmi les 69 cas déclarés, des isolements de *Brucella* ont été obtenus pour 8 cas. L'espèce de *Brucella* est précisée pour 6 cas. Il concerne 5 fois *B. melitensis* et 1 fois *B. abortus bovis*.

2.2 Evolution de l'incidence

L'incidence des cas déclarés en 1995 est de 0.18 cas pour 100 000 habitants. La baisse amorcée à la fin des années 70 se poursuit (fig 2).

2.3 Répartition dans le temps

En 1995, la répartition mensuelle des dates de début des symptômes montre un pic en mai-juin (fig 3).

2.4 Répartition géographique

La brucellose reste surtout localisée au sud-est du pays (fig 4). L'incidence moyenne annuelle est calculée pour les années 1990 à 1995 et rapportée à la population de 1992. Les départements les plus touchés sont la Haute-Corse (32 cas, incidence moyenne 4.04 pour 100 000 habitants), les Alpes de Haute Provence (18 cas, incidence moyenne 2.2), le Cantal (21 cas, incidence moyenne 2.2), les Hautes Alpes (15 cas, incidence moyenne 2.1), la Corse du Sud (11 cas incidence moyenne 1.5) et la Savoie (21 cas, incidence moyenne 0.9).

2.5 Répartition par âge et par sexe

En 1995, 72% des personnes atteintes sont de sexe masculin et 28% de sexe féminin. La moyenne d'âge est de 39 ans (± 17). Les âges s'échelonnent de 6 à 83 ans avec un pic entre 30 et 50 ans chez l'ensemble des cas (49% des cas) et chez les hommes (54% des cas masculins) alors que le pic pour les femmes se situe entre 40 et 60 ans (53% des cas féminins). 10% des personnes atteintes sont des mineurs : 5 enfants de moins de 12 ans et 2 adolescents.

2.6 Répartition par catégorie socio professionnelle

En 1995 parmi les 60 cas documentés sur l'origine socioprofessionnelle, 24 personnes (40%) exercent une profession à risque pour la brucellose : en rapport avec l'élevage ou l'agriculture pour la moitié d'entre eux (agriculteur, éleveur, négociant en bétail) ou au contact avec la viande pour l'autre moitié (personnel d'abattoir ou d'équarrissage, boucher). Il n'y a pas de vétérinaire ni de personnel de laboratoire. Parmi ces 24 personnes, 23 sont des hommes. De plus, 3 cas sont déclarés par des retraités de profession agricole.

2.7 Mode de contamination

L'origine de la contamination n'est jamais confirmée mais seulement indiquée comme cause suspectée de la contamination. Plusieurs origines peuvent être citées par un cas.

Parmi les professions à risque, le contact avec les animaux infectés est la principale source de contamination citée dans le milieu rural (75% en 1995). La consommation de produits laitiers frais est citée par 33% des cas de cette catégorie professionnelle. Dans le milieu de la viande et de l'équarrissage l'origine de la contamination est rarement précisée.

Par ailleurs, parmi les 24 personnes en activité présentant un risque professionnel vis à vis de la brucellose le foyer suppose est indiqué précisément 15 fois (soit 22% de l'ensemble des cas de brucellose). Ceci concerne 5 exploitations agricoles (l'une avec 2 cas) et 7 établissements travaillant la viande ou les cadavres animaux (deux avec 2 cas).

Parmi les cas n'exerçant pas de profession à risque, la suspicion de contamination par des produits laitiers est le mode de contamination le plus fréquemment évoqué, par 62% des cas dont 17% lors d'un séjour à l'étranger (tous des pays méditerranéens). Le contact avec des animaux contaminés ou du fumier est cité par 26% des cas n'appartenant pas à une profession à risque. Le fumier est par ailleurs suspecté par 4 cas d'avoir été source de contamination indirecte par l'intermédiaire de produits de potagers familiaux.

3. Cas groupés

En 1995, pour 17 cas (25%) la notion de cas dans l'entourage (de 1 à 5) a été indiquée.

4. Références

1. Tchakamian S, Lepoutre A, Pierre V. BEH 1996; 34.
2. Rufat P, Merlin P, Cluzan S, Hubert B. BEH 1990; 36.
3. Heurtier-Hartmann A, Hubert B, Gaillot B. BEH 1988; 41.

Figure 1 : Délai de déclaration des cas de brucellose - France 1995

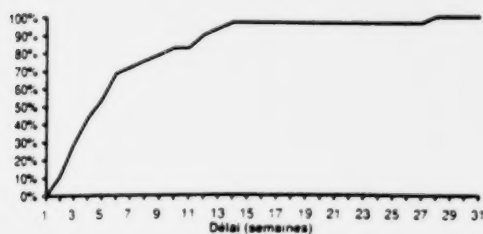


Figure 3 : Distribution mensuelle des cas de brucellose déclarés en 1995

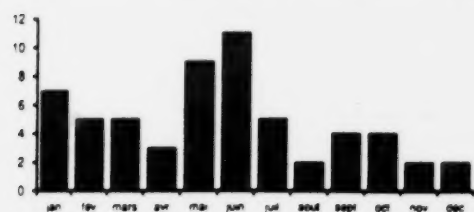


Figure 5 : Répartition par âge et par sexe des cas de brucellose en 1995

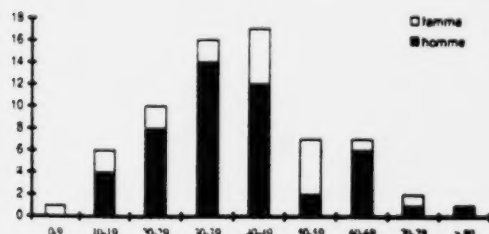


Figure 7 : Répartition des cas selon le mode de contamination suspecté - Brucellose 1995

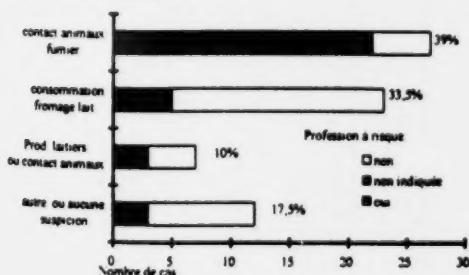


Figure 2 : Evolution du nombre de cas de brucellose - France 1960-95



Figure 4 : Incidence annuelle moyenne départementale de la brucellose

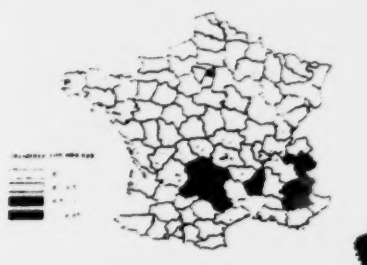


Figure 6 : Répartition par profession des cas de brucellose - 1995

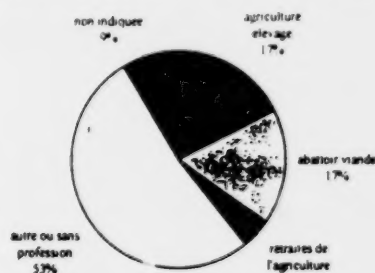
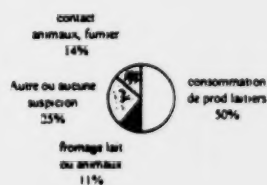


Figure 8 : Mode de contamination suspecté des professions non exposées - Brucellose 1995



MESURE C



Encouragement de la publication des résultats
et promotion de l'utilisation des connaissances

LISTE DES PUBLICATIONS
ANNEE 1996

TITRE	NOM DE LA REVUE OU DE L'EDITEUR	DATE DE PUBLICATION	SERVICE	AUTEURS
Quantitation of polymerase chain reaction-amplified DNA fragments by capillary electrophoresis and laser-induced fluorescence detection	Electrophoresis 1996, 17(3), 512-517	04/96	CEB/BB	Vincent U, Patra G, Therasse J, Garell P
Recherche de biotégérateurs bactériens spécifique d'un composé organophosphoré: le VX. Present concepts in biodefense and future directions	Thèse d'Etat	11/1/96	CEB/BB	BEZE/AUS
Multiplex PCR assay for identification of <i>Bacillus anthracis</i> and différenciation from <i>Bacillus cereus</i> group bacteria.	Salisbury Medical Bulletin 1996 Special Suppl. 87/51	Live en cours d'édition Mars 1996	CEB/BB	Giarrigue H
Detection of the vegetative form of <i>Bacillus anthracis</i> in soil by PCR	Salisbury Medical Bulletin 1996 Special Suppl. 87/50	Mars 1996	CEB/BB	Ramisse V, Patra G, Vaude Lautier V, Sylvestre P, Therasse J, Guesdon JL
DNA fingerprinting of <i>Bacillus anthracis</i> strains.	Salisbury Medical Bulletin 1996 Special Suppl. 87/59	Mars 1996	CEB/BB	Sjostedt A, Ericksenn U, Ramisse V, Therasse J et Guesdon JL
Separation de fragments d'ADN double brin et de polynucleotides par électrophorèse capillaire - Application à des échantillons biologiques	Thèse Paris VI	05/07/96	CEB/BB	Patra G, Ramisse V, Sylvestre P, Therasse J et Guesdon JL Vincent U
Identification and characterisation of all forms of <i>Bacillus anthracis</i> by multiplex PCR analysis of targeted sequences on pXO1, pXO2 and chromosome DNA	FEMS Microbiology letters 145, 1996, 9-16		CEB/BB	Ramisse V, Patra G, Giarrigue, Guesdon JL., Mock M
Isolation of a specific chromosomal DNA sequence of <i>Bacillus anthracis</i> and its possible use in diagnosis	FEMS immunology and medical microbiology letters thèse	in press	CEB/BB	Patra G, Sylvestre P, Ramisse V, Therasse J, Guesdon JL
Ribotypage et caractérisation de <i>Bacillus anthracis</i> Topical passive immunotherapy of Influenza virus by polyvalent human immunoglobulins or F(ab) fragments in Balb/c mice	Clinical Experimental Immunology	in press	CEB/BB CEB/BB	Patra G Ramisse F, Deramoudt F, Szatanki M, Bianchi A, Binder P, Hannoun C, Alonso JM

Pathologies associées au virus HTLV-1 à Dakar (1992-95)	Med Trop	1996	CRSSA	P. Michel, M. Develoux, F. Talarmin, P. Ndiaye, M. Ndiaye, G. Raphenon et A. Gessain
Définition de déterminants antigéniques utilisables dans le diagnostic rapide de cinq arboviroses humaines	S.S.A. Trav. Scient.	1996	SSA	T. Brulavoine, N. Clerc, J.M. Crance, A. Jouan et P. Michel
Etude d'un appareil applicateur de boîtes contact pour le mesurage de la biocontamination des surfaces : comparaison avec la méthode manuelle	Hygiènes S,	1996	CRSSA	A. Cols, D. Vidal, O. Martinack, A. Bonnet, F. Doleans et M. Saulnier
Role of iron and nitric oxide in murine salmonellosis, in E. FAIST (Ed.) Proceedings of the 3 rd International Congress on the Immune consequences of Trauma, Shock and Sepsis	PABST Science Publishers	1996	CRSSA	Y.P. Gauthier, M.F. Burckhart and D. Vidal
The role of L-arginine-nitric oxide pathway and reactive oxygen species in infection of resistant and susceptible mice by <i>Salmonella typhimurium</i>	Proceedings of the 4th International Meeting on the Biology of Nitric Oxide, Amelia Island, Florida, USA, Portland Press	1996	CRSSA	Y.P. Gauthier and D. Vidal
Modulation of TNF- α and NO responses in <i>Salmonella typhimurium</i> infected mice after in vivo immunomodulatory therapy	Proceedings of the 4th International Meeting on the Biology of Nitric Oxide, Amelia Island, Florida, USA, Portland Press	1996	CRSSA	C. B. Iteux-Gauthier, S. F. Ilat, F. Condemine, N. Burdin, D. Vidal, and F. Picot and P. Potier
Resistance to aldehyde disinfectants of <i>Bacillus</i> species spores	Salisbury Medical Bull.,	1996	CRSSA	D. Vidal, Rovarch D., Desor F. and Richard M.
Sterilisation et sporicide. Aspects fondamentaux et appliqués à l'hygiène hospitalière	Médecine et Amies	sous presse	CRSSA	D. Vidal
Biofilms bactériens et résistance aux désinfectants	Ann. Pharm. Franç.,	1996	CRSSA	D. Vidal, F. Thibault et C. Ragot
Rôle du monoxyde d'azote et des dérivés actifs de l'oxygène dans la salmonellose murine.	Rapport de synthèse final, contrat DRET n° 94/7.	1996	CRSSA	Y. Gauthier et D. Vidal
Pathogénicité bactérienne. Etude de <i>Burkholderia pseudomallei</i>	Rapport de synthèse final, contrat DRET n° 94/6	1996	CRSSA	D. Vidal, F. Thibault, J.C. Paucaud et C. Bottex-Gauthier
Optimisation du procédé de stérilisation plasma répondant au besoin des formations sanitaires de campagne	Rapport de synthèse final, contrat ETAS n° 565/5034	1996	CRSSA	D. Vidal et J. Pelleter

Purification d'une protéase de 42 kDa produite par <i>Burkholderia</i> (<i>Pseudomonas</i>) <i>pseudomallei</i> .	S.S.A. Trav. Scient.	1996	CRSSA	F. Thibault, S. Cociancich, J.-C. Paucod, F. Gignoux, I. Thibault et D. Vidal
Rôle du monoxyde d'azote et des dérivés actifs de l'oxygène dans la salmonellose murine : différence entre souche résistante CBA (try ^r) et souche sensible BALB/C (try ^s)	S.S.A. Trav. Scient.	1996	CRSSA	Y. Gauthier et D. Vidal
Inféret de l'immunomodulation dans la protection de la souris infectée expérimentalement par <i>Salmonella typhimurium</i>	S.S.A. Trav. Scient.	1996	CRSSA	C. Bortex Gauthier, S. Ferlat, F. Condemine, F. Picot, D. Vidal et P. Potier
Etude comparative de la sensibilité aux désinfectants aldéhydiques des spores de <i>Bacillus anthracis</i> et d'autres espèces de <i>Bacillus</i>	S.S.A. Trav. Scient.	1996	CRSSA	D. Vidal, F. Desor et M. Richard
Arginine improves non specific resistance to infection of immunocompromised mice. 14 th International congress of the society for leukocyte biology	The phagocyte, molecular and clinical aspects	1996	CRSSA	Y.P. Gauthier and D.R. VIDAL
Protection against infectious diseases in French Army : present and future prospects	Third Biological Defence Conference, Munich, RFA	1996	CRSSA	P. Binder, D. Vidal and G. Blanchet
Stérilisation et sporidie	Rencontre nationale sur la lutte contre les infections nosocomiales dans les armées, Lyon	1996	CRSSA	D. Vidal et F. Desor
Corrélation entre la résistance aux agents chimiques sporocides et la structure microscopique des tuniques des spores de différentes espèces de <i>Bacillus</i>	Réunion du groupe "antiseptiques et désinfectants", Société Française de Microbiologie, Lyon	1996	CRSSA	D. Vidal, F. Desor et M. Richard
Etude de la croissance de <i>Burkholderia</i> (<i>Pseudomonas</i>) <i>pseudomallei</i> en milieu chimiquement défini	Rapport de fin d'études INSA, Toulouse	1996	Université de TOULOUSE	C. Kula
Optimisation du procédé de stérilisation par plasma	Diplôme d'études approfondies Génie des procédés, Université Joseph Fourier, Grenoble	1996	Université de GRENOBLE	S. Hury
Etude épidémiologique et sensibilité de <i>Clostridium difficile</i> aux antiseptiques et aux désinfectants	Diplôme d'études approfondies Ecologie microbienne, Université Claude Bernard, Lyon	1996	Université de LYON	J.Y. Dusseau
Molécules immunomodulatrices naturelles. Mécanismes d'action et étude du pouvoir protecteur chez la souris	Thèse Doct., Grenoble	1996	Université de GRENOBLE	S. Ferlat

Résistance aux agents désinfectants des bactéries en biofilm	Thèse Doct. Pharm., Lyon	1996	Université de LYON	C. Ragot
Partial genomic sequence determination of hellow fever virus strain associated with a recent epidemic in Gabon	Acta Virologica	1996	IMTSSA	Pisano M.R., Durand J.P. and Tolou H.
Partial inhibition of yellow fever virus replication in vitro with different phosphorothioate oligodeoxynucleotides	Acta Virologica	1996	IMTSSA	Tolou H., Puggelli H., Tock F. and Durand J.P.
Identification de l'ARN génomique d'un virus amaril dans des séruma prélevés en Afrique en novembre 1994	Trav. Scient.	1996	SSA	Pisano M.R., Durand J.P. et Tolou H.
La notion de topotype et le concept de quasi-espèce : l'exemple du virus amaril	Trav. Scient.	1996	SSA	Pisano M.R. et Tolou H.
Sensibilité des flavivirus aux oligonucleotides naturels et phosphorothioates	Trav. Scient.	1996	SSA	Tolou H., Tock F. et Puggelli H.
Full genomic sequence of a new-type strain of yellow fever virus evolution : implications for yellow fever virus evolution	1st International Virology and Microbiology Conference, Yaoundé, Cameroun	1996	IMTSSA	Pisano M.R., NICOLI J. et TOLOU H.
Actualité des infections à virus de la dengue : aspects épidémiologiques et physiopathologiques	5ème congrès international de Médecine tropicale de langue française, Ile Maurice	1996	IMTSSA	Tolou H., Baudon D. et Laroche R.
Contribution à l'étude du virus amaril. Topotypes et quasi-espèce virale. Position taxonomique dans le genre Flavivirus	Thèse de Doctorat	1996	Université d'AX	Pisano M.R.
"Apport de constructions d'ADN copie et d'oligonucleotides antisens à l'étude d'étapes critiques dans le cycle de deux flavivirus, le virus dengue type 2 et le virus amaril"	Thèse de Doctorat	1996	Université d'AX	H. Tolou

MESURE D



Promotion active de contacts

REPARTITION DES STAGES ET VISITES EN 1996 EN BIOLOGIE.

<u>REPARTITION DISCIPLINAIRE</u>	<u>REPARTITION GEOGRAPHIQUE</u>
Bactériologie, Virologie, Parasitologie:	Amérique: 20
Biologie cellulaire, moléculaire et médecine:	Afrique: 94
Neurosciences:	Asie-Pacifique: 50
Biochimie	Europe Centrale et Orientale : 126
Immunologie:	Moyen-Orient: 38
TOTAL:	TOTAL: 328

GERMANY

(23 April 1997)

The Permanent Mission of Germany to the United Nations presents its compliments to the Secretariat of the United Nations and, with reference to resolution 46/35, has the honour to communicate the enclosed information.

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE

Measure	Nothing to declare	Nothing new to declare
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A, part 1		X
A, part 2 (i)		X
A, part 2 (ii)		
A, part 2 (iii)		X
B (i)		
B (ii)	X	
C		
D		
E		X
F		X
G		

Date: 15 April 1997

State Party to the Convention: GERMANY

Form A, part 2 (ii)**National Biological Defence Research
and Development Program**

II: Description

1. State the objectives and funding of the program and summarize the principal research and development activities conducted in the program.

The R&D activities of the national program include:
Prophylaxis, diagnostic techniques, sampling and detection techniques,
toxinology, decontamination and physical protection

2. State the total funding for the program and its source.

The program is funded by the Federal Ministry of Defence.
The total funding in 1996 was approx 7,8 Mio Deutsche Mark.

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes

4. What proportion of the total funds for the program is expended in these contracted or other facilities?

approx 58 percent

5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para 4.

The objective of the contracted activities is to provide pertinent expertise and hardware to the Federal Ministry of Defence for the improvement of the B-defence capabilities. The research areas are the same as mentioned above under # 1.

6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program)

See 1992 declaration

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Two Forms A, part 2 (iii) attached

Form A, part 2 (iii)**National Biological Defence Research
and Development Program****1. What is the name of the facility?**

Wehrwissenschaftliches Institut für Schutztechnologien - ABC-Schutz
(Research Agency for Protective Technology - NBC Defence)

2. Where is it located?

D-29633 Munster/Oertze, Humboldtstr.
(53°00' north, 10°08' east)

3. Floor area of laboratory areas by containment level:

BL 2	520	m ²
BL 3	230	m ²
BL 4	--	m ²

Total Laboratory Floor Area 750 m²

The organizational structure of the facility:

The workload of the Biology Section of the facility is approx. 40 percent in B-defence and approx. 60 percent in environmental protection. The following personnel figures cover the total strength for both working areas because of the engagement of some of the personnel in both areas.

I) Total number of personnel: 34

II) Division of personnel
Civilian 34

III) Division of personnel by category
Scientists 10
Engineers 03
Technicians 11
Admin. and support staff 10

IV) Represented scientific disciplines:
veterinary medicine, biology, biochemistry (bacteriology, mycology, virology, toxicology, toxinology, pathology, environmental toxicology, ecology, biotechnology)

V) Contractor staff: 01

VI) Source of funding:
Federal Ministry of Defence

VII) Funding levels for the following program areas:
The funding for the 40 percent share for personnel, consumable items and equipment in 1995 was approx. 1,4 Mio DM

Research	20 %
Development	50 %
Test and Evaluation	30 %

VIII) Publication policy
Results will be published primarily in reports to the Federal office for Military Technology and Procurement and to the Federal Ministry of Defence.

IX) Lists of publically available papers and reports resulting from the work during the previous 12 month:
In 1996 no results from the field of B-Defence were published in scientific journals.

5. Brief description of the biological defence work carried out at the facility, including types of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

- a. Development of early-warning systems permitting non-specific identification of toxins and microorganisms
- b. Development of equipment and procedures for rapid and accurate identification of toxins and pathogenic agents in samples from air, water, soil, vegetation (sensor-equipped collectors, detection sticks)
- c. Development of procedures for disinfection and decontamination

The current program covers non-human pathogen R I and R II organisms.

No outdoor studies of biological aerosols.

Form A, part 2 (iii), Annex 1

**Publications from Akademie
des Sanitäts- und Gesundheitswesens
der Bundeswehr
Institut für Mikrobiologie
1996**

Otterbein, C.-K., Meyer, H., Renner-Müller, I.C.E. und E. Munz
In vivo and in vitro characterization of two camelpoxvirus isolates with decreased virulence.
Revue d'élevage et de médecine vétérinaire des pays tropicaux 49, 114 - 120

Otterbein, C.-K., Neubauer, H. und H. Meyer
Diagnostik humanpathogener Orthopockenviren mittels PCR.
6. Hohenheimer Seminar „Vorbeugemaßnahmen bei der Zoonosebekämpfung“,
publiziert anlässlich eines Posters;
Verlag der DVG e.V. 254-258

Grunow, R., von Overbeck, J., Frutig, K., Frei, E., German, D., Furrer, H., Perrin, L.
und W.J. Pichler
Inhibition of syncytia-inducing (SI) virus by autologous serum from HIV-1- infected individuals.
Clinical and Diagnostic Virology 6, 127-135

Grunow, R., J., Frutig, K., und W.J. Pichler
Anergy induction in human CD4+ T cell clones by stimulation with soluble peptide does not require cell proliferation and is accompanied by an elevated IL4 production.
Cellular Immunology 79 - 86

Grunow, R.
Normale und pathologische Immunreaktionen.
im Lehrbuch „Pädiatrie“, Rossi et al., Thieme Verlag, 503 - 518

Müller, T., Henning, K., Kramer, M., Czerny, C.-P., Meyer, H., und K. Ziedler (1995)
Seroprevalence of orthopox virus Specific antibodies in red foxes (Vulpes vulpes) in the Federal State Brandenburg, Germany.
Journal of Wildlife Diseases 32, 348 - 353

Atengi, A., Pfeffer, M., Meyer, H., Osterrieder, N., Kaaden, O.R. und F. Uyanik
Zmit Bölgesinden İzole Edilen Equine Herpes Virusun Moleküler Karakteri ve
Türkiye EHV-1 Virüsünün Moleküler Karakteri ve
Türkish Journal of Veterinary and Animal Sciences 20, 169-173

Pfeffer, M., Meyer, H., Wernery, U. und O.R. Kaaden
Comparison of camelpox viruses isolated in Dubai.
Veterinary Microbiology 49, 135 - 146

VII) Funding levels for the following program areas:

The funding for personnel, consumable items and equipment in 1996 was approx. 1,9 Mio DM

Research	60 %
Development	30 %
Test and Evaluation	10 %

VIII) Publication policy

Results will be published in scientific journals as well as in reports to the Federal Ministry of Defence and will be presented in scientific meetings.

IX) Lists of publically available papers and reports resulting from the work during the previous 12 month:

See Annex 1

5. Brief description of the biological defence work carried out at the facility, including types of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols:

- a. Research in rapid detection and differentiation of orthopox viruses with MABs, DNA-Probes and PCR
- b. Research in rapid detection and differentiation of Burkholderia, Francisella and Yersinia spp. (without Y. pestis)
- c. Production of monoclonal antibodies against Yersinia, Burkholderia and Brucella and production of test kits.

Dick, E.J. Jr., Kittell, C., Meyer, H., Farrar, P.I., Ropp, S.L., Esposito, J.J., Buller, R.M.L., Neubauer, H., Kang, Y.H. und A.E. McKee
 Mousepox Outbreak in a Laboratory Mouse Colony
 Laboratory Animal Science 46, 602 - 611

Poster:

Meyer, H., Neubauer, H., Köstler, J., Reischl, U. und H. Wolf
 Nachweis von Affenpockenvirus durch PCR
 Jahrestagung der Gesellschaft für Virologie, 06. - 09. 3.1996, Jena

Neubauer, H., Zöller, G. und J. Dick
 Contaminated commercial mouse serum causes a severe mousepox outbreak in the United States
 XI th International meeting on pox/iridoviruses, 04. - 09.05.1996, Toledo, Spain

Hölzle, L., Meyer, H. und C.P. Czerny
 Sequence analysis of the 32 kDa Adsorption protein genes of different orthopox virus (OPV) strains.
 XI th International meeting on pox/iridoviruses, 04. - 09.05.1996, Toledo, Spain

Otterbein, C.-K., Neubauer, H. und H. Meyer
 Diagnostik humanpathogener Orthopockenviren mittels PCR.
 6. Hohenheimer Seminar, 23. - 24.09.1996, Stuttgart

Neubauer, H., Köstler, J., Reischl, U., Wolf, H. und H. Meyer
 Charakterisierung eines Yersinia enterocolitica Isolates (Seroovar O.3, Biovar 4).
 48. Jahrestagung der deutschen Gesellschaft für Hygiene und Mikrobiologie,
 08. - 11.10.1996, Bonn

Sauer, T., Becker, H., Wolf, H. und H. Meyer
 Diagnostik enteropathogener Yersinia enterocolitica Isolate
 48. Jahrestagung der deutschen Gesellschaft für Hygiene und Mikrobiologie,
 08. - 11.10.1996, Bonn

Linde, H., Neubauer, H., Lehn, N., Meyer, H. und H. Wolf
 Identifizierung von Yersinia spp. mit dem VITEK System.
 48. Jahrestagung der deutschen Gesellschaft für Hygiene und Mikrobiologie,
 08. - 11.10.1996, Bonn

Splettstößer, W.D., Neubauer, H., Otterbein, C.-K., Meyer, H. und E.-J. Finke
 Moderne Methoden in der mikrobiologischen Diagnostik.
 27. Kongreß der Deutschen Gesellschaft für Wehrmedizin und Wehrpharmazie,
 11. - 13. 10. 1996, Amberg

Neubauer, H. und H. Meyer
 Specific Identifikation of Cowpoxvirus by using a nested PCR.
 1. Poster Workshop „Methodische Entwicklungen in der mikrobiologischen Nukleinsäure-Diagnostik,
 05. - 06.12.1996, Berlin

Form B (i)

Exchange of information on outbreaks
of infectious diseases and similar
occurrences caused by toxins

**Human Diseases
(cases)**

	1992	1993	1994	1995	1996
Anthrax	2	2	1	0	0
Botulism	4	17	13	12	13
Brucellosis	23	21	28	36	23
Cholera	2	1	7	1	0
Glanders	0	0	0	0	0
Ornithosis	159	2111	140	180	134
Plague	0	0	0	0	0
Q fever	186	83	52	45	72
Shigellosis	2339	1959	2320	1859	1504
Smallpox	0	0	0	0	0
Tularemia	2	2	5	2	2
Typhus abdominalis	213	197	172	162	144
Typhus fever	1	2	1	3	0
Viral encephalitis	1665	1255	1318	768	781
Viral hemorrhagic fever	0	10	0	0	11
Yellow fever	0	0	0	0	0

Form B (i)

Exchange of information on outbreaks
of infectious diseases and similar
occurrences caused by toxins

**Animal Diseases
(outbreaks)**

	1992	1993	1994	1995	1996
African swine fever	0	0	0	0	0
Anthrax	1	1	1	0	0
Aujeszky's disease	479	446	241	79	42
Brucellosis	7	10	14	4	4
Foot and mouth disease	0	0	0	0	0
Log cholera	13	100	117	52	4
Newcastle disease	3	181	179	28	2
Ornithosis/Psittacosis	471	494	398	399	386
Q fever	367	363	195	296	236
Rabies	708	344	418	189	66
Rinderpest	0	0	0	0	0
Sheep pox	0	0	0	0	0
Swine vesicular disease	0	0	0	0	0
Teschen disease	0	0	0	0	0
Ularemia	1	0	0	0	0

Form C**Exchange of information on published results**

In 1996 scientific papers relating to research and development for prophylactic and/or protective measures against microbial and biological agents and toxins sponsored by the Federal Ministry of Defence have been published in the following journals:

Appl. Environm. Microbiology

Appl. Microbiology

Cellular Immunology

Clinical and Diagnostik Virology

Clin. Exp. Immunology

FEMS Microbiology Letters

Forschungsberichte aus der Wehrmedizin

Journal of Comp. Pathology

Journal of Gen. Virology

Journal of Virol. Methods

Journal of Wildlife Diseases

Laboratory Animal Science

Mitteilungen der Österreichischen Gesellschaft für Tropenmedizin und Parasitologie

Revue d'élevage et de médecine vétérinaire des pays tropicaux

Tierärztliche Umschau

Turkish Journal of Veterinary and Animal Sciences

Veterinary Microbiology

Virology

Virus Genes

Virus Research

Wehrmedizinische Monatsschrift

Form D

Active Promotion of Contacts

Planned international conferences, symposia, seminars and other similar forums for exchange

Name of the conference	Medical conference of protection against bw-agents
Arranging organization	Federal Armed Force Medical Academy- Institute of Microbiology
Time	22-23th October 1997
Place	Munich
Main subjects	1 Impact of biological threat 2 Principles and measures of the management of biological warfare casualties 3 Objectives of the medical biological defence research and development research
Conditions for Participation	Experts named by States Parties
Point of contact for further information, registration etc.	OFA Dr. Finka, Federal Armed Force Medical Academy -Institute of Microbiology, D-80937 München, Neuherbergstr. 11

Form G**Declaration of Vaccine
Production Facilities**

- A. 1. Name of Facility**
**Bundesinstitut für Infektionskrankheiten und nicht übertragbare
Krankheiten - Robert-Koch-Institut**
- 2. Location (mailing address)**
Nordufer 20
13353 Berlin
- 3. General description of the types of diseases covered:**
yellow fever
- B. 1. Name of Facility**
Chiron Behringwerke GmbH & Co
- 2. Location (mailing address)**
Postfach 11 40
35001 Marburg
- 3. General description of the types of diseases covered:**
cholera, diphtheria, influenza, meningitis, pertussis, poliomyelitis,
rabies, tetanus, tuberculosis, tick-borne encephalitis
- C. 1. Name of Facility**
Luitpold Pharma GmbH
- 2. Location (mailing address)**
Luitpoldstr. 10
85276 Pfaffenhofen
- 3. General description of the types of diseases covered:**
multibacterial lysat (tablets) based on *Staphylococcus aureus*,
Streptococcus spp. etc. for the treatment of respiratory infections.
- D. 1. Name of Facility**
Sächsisches Serumwerk GmbH
- 2. Location (mailing address)**
Zirkusstr. 40
08010 Dresden
- 3. General description of the types of diseases covered:**
influenza, tetanus

HUNGARY

(18 April 1997)

The Permanent Mission of the Republic of Hungary to the United Nations presents its compliments to the Centre for Disarmament Affairs of the United Nations and has the honour to forward the Declaration of Hungary in accordance with the Final Document of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

Declaration in accordance with the Final Document of the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction.

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE	NOTES
A, part 1	☐	☐	Annex 1-5
A, part 2 (i)	☒	☐	
A, part 2 (ii)	☒	☐	
A, part 2 (iii)	☒	☐	
B (i)	☐	☐	Annex 6.
B (ii)	☒	☐	
C	☐	☐	Annex 7.
D	☐	☐	Annex 8.
E	☐	☒	
F	☐	☒	
G	☐	☐	Annex 9.

Date: 8 April, 1997

Annex 1

Measure A, part 1
FORM A

- | | |
|--|---|
| 1. Name | "B.JOHAN" NATIONAL INSTITUTE
of PUBLIC HEALTH
Virological Dpt., Bacteriological Dpt., Bacteriophage
Dpt.
Mycological Dpt., Parasitological Dpt., Immunological
Products Control Department. |
| 2. Responsible | MINISTRY OF WELFARE |
| 3. Address | Budapest Gyáli ut 2-6
1097 Hungary |
| 4. Financed by | MINISTRY OF WELFARE |
| 5. Number of
maximum
containment units | none |
| 6. Highest level
of protection | P2 |
| 7. Scope and general
description of
activities | For public health purposes:
diagnosis of infectious diseases, control of vaccines,
diagnosis of bacterial plasmids, studies on molecular
genetic of virulence plasmids and development of
nucleic acid probes for detection of herpesvirus,
adenovirus and parvovirus B19 infections |

Annex 2

Measure A, part 1
FORM A

- | | |
|--|--|
| 1. Name | NATIONAL INSTITUTE OF HYGIENE
Microbiological Research Group |
| 2. Responsible | MINISTRY OF WELFARE |
| 3. Address | Budapest Pihenô ut 1.
1529 Hungary |
| 4. Financed by | MINISTRY OF WELFARE |
| 5. Number of maximum containment units | none |
| 6. Highest level of protection | P3 |
| 7. Scope and general description of activities | For public health purposes:
Propagation of HIV-1 and HIV-2 viruses in tissue cultures. Verification of positive HIV-1 and HIV-2 antibody tests. |

Annex 3

Measure A, part 1
FORM A

- | | |
|--|---|
| 1. Name | CENTRAL VETERINARY INSTITUTE |
| 2. Responsible | MINISTRY OF AGRICULTURE |
| 3. Address | BUDAPEST Tábornok u. 2.
1149 Hungary |
| 4. Financed by | MINISTRY OF AGRICULTURE |
| 5. Number of maximum containment units | none |
| 6. Highest level of protection | a./ primary containment: minimum high
b./secondary containment: safety isolated laboratories to work with highly contagious pathogenic microbes. |
| 7. Scope and general description of activities | general diagnostic activities, the verification or exclusion of the existence of certain diseases (foot-and-mouth disease, African swine fever, other vesicular diseases and hog cholera) |

Annex 4

Measure A, part 1
FORM A

- | | |
|--|---|
| 1. Name | STATE CONTROL INSTITUTE FOR
VETERINARY BIOLOGICALS,
DRUGS AND FEEDS |
| 2. Responsible | MINISTRY OF AGRICULTURE |
| 3. Address | Budapest Szállás utca 8.
1107 Hungary |
| 4. Financed by | MINISTRY OF AGRICULTURE |
| 5. Number of
maximum
containment units | none |
| 6. Highest level
of protection | P2 |
| 7. Scope and general
description of
activities | laboratory control of veterinary biological (vaccines,
sera and diagnostic products) for efficacy and safety, in
addition laboratory investigations to study some
contagious diseases (hog cholera, Newcastle diseases,
IBR, anthrax) |

Annex 5

Measure A, part 1
FORM A

- | | |
|--|--|
| 1. Name | AGRICULTURAL
BIOTECHNOLOGICAL CENTER
(ABC) |
| 2. Responsible | MINISTRY OF AGRICULTURE |
| 3. Address | Gödöllő, Szent-Györgyi Albert u. 4.
2101 Hungary |
| 4. Financed by | MINISTRY OF AGRICULTURE |
| 5. Number of
maximum
containment units | none |
| 6. Highest level
of protection | P2 |
| 7. Scope and general
description of
activities | research and development in agricultural biotechnology
by recombinant DNA techniques. |

Annex 6

Measure B
FORM B**Background information on outbreaks of reportable infectious
human diseases**

diseases	number of cases in 1995
AIDS	31
Amoebiasis	118
Anthrax	-
Brucellosis	2
Dyspepsia Coli	193
Encephalitis infectiosa	60
Hepatitis infectiosa	1661
Keratoconjunctivitis epidemica	141
Leptospirosis	31
Lyssa	-
Malaria	8*
Meningitis epid.	22
Meningitis serosa	102
Mononucleosis infectiosa	851
Morbilli	4
Ornithosis	28
Paratyphus	-
Parotitis epidemica	558
Pertussis	3
Q-fever	1
Rubeola	288
Salmonellosis	22474
Scarlatina	6703
Shigellosis	1351
Staphylococcosis	16
Taeniasis	4
Tetanus	14
Tickencephalitis	240
Toxoplasmosis	195
Trichinellosis	2
Tularemia	131
Typhus abdominalis	-

Notice: * imported cases

The appearance of infectious diseases show no deviation from the normal pattern

Annex 7

Measure C

LIST OF PUBLICATION

M. Rusvai, L. Kucsera, V. Pálfi

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T. Soós, S. Belák

Vaccination against bovine herpesvirus type 1 (BHV-1)
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S. Belák, T. Soós

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isolation of the Frijters strain in the diagnosis and eradication of the disease
Hungarian Veterinary Journal (HVJ) 1996.51.11.681-685.

M. Halász, P. Csokán, K. Mészáros-Árvai

Good-bye to the microbiological assay of antibiotics?
International Analytical Group. Section Feed Microbiology. Proceedings.
Speyer, 1996.

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Molekylär epidemiologi i samband med klassisk svinpest. Fårvirus misstas
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Annex 8

Measure D
FORM D

ACTIVE PROMOTION OF CONTACT

**Planned international conferences, symposia, seminars and other
similar fora for exchange of information**

OECD WORKSHOP

POTENTIAL ECOLOGICAL IMPACT OF TRANSGENIC PLANTS EXPRESSING VIRAL SEQUENCES

Agricultural Biotechnology Center, Gödöllő, Hungary
24-26. April 1997.

Organizers

Ervin Balázs (Gödöllő, Hungary)
Mark Tepfer (Versailles, France)

Invited speakers include:

R.F. Allison (USA)
F. Garcia-Arenal (Spain)
D. Bartsch (Germany)
J. J. Bujarski (USA)
Y. Candresse (France)
D. Gallitelli (Italy)
A. J. Gibbs (Australia)
M. Jacquemond (France)
E. Maiss (Germany)
J. E. Schoelz (USA)
A. E. Simon (USA)

Attendance will be limited to 30 participants and will be selected on the basis of their potential to contribute to the discussion and on the basis of their research interest. Applicants are requested to send an abstract on their current results and state their reasons for wishing to participate. Accommodation with full board of the accepted applicants will be covered. Applications should reach the organizers before 15 January 1997 at

Agricultural Biotechnology Center at Gödöllő
H-2101 P.O. Box 411, Gödöllő, Hungary
Phone: (36)-28-420-521; Fax: (36)-28-420-096
E-mail: "balazs@huapl.abc.hu"

Annex 9

Measure G
FORM GDeclaration of Vaccine Production Facilities

1.

Institute HUMAN for Serobacteriological Production Pharmaceutical Manufacturing Co.

**H-2100 Gödöllő
Táncsics M. u 87**

**H-1107 Budapest
Szállás u 5.**

Institute HUMAN Co. specializes on the production of biological for human use such as vaccines, immunostimulants, allergologicals, sera, blood derivatives, infusions, diagnostics, media, peptones, varia. The production includes the following vaccines:

Diphtheria-Pertussis-Tetanus vaccine
Diphtheria-Tetanus vaccine
Tetanus-Toxoid vaccine
Typhoid vaccine
Cholera vaccine
Polyvalent Staphylococcal vaccine
Ozaena vaccine
Candida Albicans vaccine
Trichophyton vaccine
Candida-Trichophyton vaccine

2.

"B. Johan" National Institute of Public Health

H-1097 Budapest Gyáli u 2-6.

Influenza A and B vaccine (whole virus) inactivated, BCG vaccine.

3.

PHYLAXIA-SANOFI Veterinary Biologicals Co. Ltd.**H-1107 Szállás u 5. Budapest**

Phylaxia-Sanofi is producing veterinary biological products, including live, attenuated and inactivated vaccines, hyperimmune sera, diagnostics, blood derivatives etc. concerning the following diseases and microorganisms.

Disease/Microorganism	O.I.E. list
<i>Aspergillus niger</i>	-
Aujeszky's disease (pseudorabies) SHV-1	B2
Avian encephalomyelitis virus	-
Avian infections laryngotracheitis (ILT)	B56
Avian infectious bronchitis virus H-52, H-120, M 41	B55
<i>Bacillus anthracis</i> 34 F2	B1
<i>Bordetella bronchiseptica</i>	
Bovine adenovirus 1	
Bovine adenovirus 8	
Bovine parainfluenza-3 virus	
Bovine respiratory syncytial virus	
Bovine rotavirus	
Bovine virus diarrhoea (Mucosal disease) virus	B81
<i>Brucella abortus</i>	B12
<i>Candida albicans</i>	-
Canine distemper virus	
Canine hepatitis, CAV-1	
Canine parvovirus	
<i>Chlamidia psittaci</i>	B66
<i>Clostridium chauvoei</i>	
<i>Clostridium novyi</i>	
<i>Clostridium perfringens</i> A	
<i>Clostridium perfringens</i> C	
<i>Clostridium perfringens</i> D	
<i>Clostridium septicum</i>	
<i>Clostridium sordellii</i>	
<i>Clostridium tetani</i>	
Contagious ecthyma virus	
<i>Coxiella burnetii</i> -B7	
Duck enteritis virus	B59
Duck hepatitis virus	B58
EDS	
<i>Erysipelotrix rhusiopaathiae</i>	
<i>Escherichia coli</i>	
Fowl pox virus	
Goose parvovirus	
<i>Haemophilus pleuropneumoniae</i>	

Haemorrhagic disease of rabbits virus	B82
Infectious Bovine Rhinotracheitis virus	B19
Infectious bursitis virus	B63
Leptospira pomona	B6
Leptospira hyos	
Listeria monocitogenes	
Marek's disease, HTV (FC-126)	B64
Mycobacterium avium	B57
Mycobacterium bovis	B14
Mycobacterium paratuberculosis s. Johnei	B9
Mycoplasma arginini	
Mycoplasma arthritidis	
Mycoplasma fermentans	
Mycoplasma gallisepticum	B65
Mycoplasma hominis	
Mycoplasma meleagridis	
Mycoplasma pneumoniae	
Mycoplasma pulmonis	
Myxomatosis virus	B68
Newcastle disease virus	A16
Pasteurella haemolytica	
Pasteurella multocida (Fowl cholera)	B60
Pseudomonas aeruginosa	
Pseudomonas mallei	
Salmonella anatum	
Salmonella choleraesuis	
Salmonella gallinarum	
Salmonella hvittingfoss	
Salmonella illinois	
Salmonella kentucky	
Salmonella lomita	
Salmonella minnesota	
Salmonella muenchen	
Salmonella newington	
Salmonella paratyphy A, B	
Salmonella poona	
Salmonella senftenberg	
Salmonella schleissheim	
Salmonella strassbourg	
Salmonella typhimurium	
Salmonella wichita	
Spherophorus necrophorus	
Staphylococcus haemolyticus	
Sheep adenovirus	
Streptococcus pyogenes	
Swine fever (Hog cholera) virus	A13
Tularaemia	B69
Yersinia ruckeri	

Annex 10.

Measure E
FORM EDeclaration of legislation, regulations and other measures

RELATING TO	LEGISLATION	REGULATIONS	OTHER MEASURES	AMENDED SINCE LAST YEAR
a./ Development, production, stockpiling, aquisition of BTWC	YES ¹	NO	NO	NO
b./ Exports of microorganisms* and toxins		YES ²	NO	NO
c./ Imports of microorganisms* and toxins		YES ²	NO	NO

1. Law Decree No.: 11/1975.

2. Government Decree No.: 61/1991

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention

IRAQ

(13 May 1997)

تهدي ممثلة جمهورية العراق لدى الامم المتحدة خيانتها الى
مركز شؤون نزع السلاح في الامم المتحدة وتتشفرف ان ترفق
الاعلان المقدم من جمهورية العراق بموجب سياق تبادل
المعلومات الذي اقره المؤتمر الاستعراضي الثالث لاتفاقية
الاسلحة البايولوجية .

١ - اعلان عن "لا شيء يستوجب الاعلان" او "لا جديد يستوجب الاعلان" في تمثيل
المعلومات

لا جديد يستوجب الاعلان	لا شيء يستوجب الاعلان	التدبير
X	□	الد ، القسم ١
□	X	الد ، القسم ٢ ١١
□	X	الد ، القسم ٢ ٢١
□	X	الد ، القسم ٢ ٢١
X	□	باء ١١
X	□	باء ٢١
□	X	جيم
□	X	دال
□	X	هاء
X	□	واو
X	□	زاي

(يرجى وضع علامة في المربع المناسب (المربعان المناسب) لكل تدبير)

١٥ نيسان ١٩٩٧

التاريخ

جمهورية العراق

الدولة الطرف في الاتفاقية

IRELAND

(14 April 1997)

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A. part 1	☒	☐
A. part 2 (i)	☒	☐
A. part 2 (ii)	☒	☐
A. part 2 (iii)	☒	☐
B (i)	☐ See Attached Completed Form	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☒	☐
F	☒	☐
G	☒	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 14-4-97

State Party to the Convention: IRELAND

INFECTIOUS DISEASES NOTIFIED TO THE DEPARTMENT 1982 TO 1996

Notifiable Diseases	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	*1996
Acute Anterior Poliomyelitis	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Acute Encephalitis	4	7	10	4	7	1	-	-	-	-	1	2	1	-	7
Acute Viral Meningitis	54	191	163	120	161	81	101	52	300	83	104	39	90	74	77
Anthrax	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bacillary Dysentery	143	212	273	146	347	68	422	143	277	735	283	219	203	97	59
Bacterial Meningitis (including meningococcal septicaemia)	124	141	192	100	147	111	128	115	131	155	225	203	241	382	383
Brucellosis	159	126	126	115	53	38	22	20	15	27	26	28	14	6	10
Cholera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphtheria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Food Poisoning (bacterial other than salmonella)	68	83	164	98	195	88	43	64	157	83	46	97	62	100	275
Gastro Enteritis (when contracted by children under 2 years of age)	2404	2987	3242	3317	3815	3900	3241	3410	3758	4117	3410	3832	3043	3234	2981
Infectious Mononucleosis	55	196	233	214	145	186	286	211	208	187	208	206	183	156	216
Infectious Parotitis (Mumps)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	271	709	48	53	43	44	33	27	417
Influenzal Pneumonia	6	76	93	37	153	53	73	42	94	139	48	55	6	31	54
Legionnaires Disease	2	2	1	-	-	-	4	2	1	-	2	-	1	1	2
Leptospirosis	4	14	8	5	4	6	3	5	5	4	9	5	2	1	6
Malaria	33	17	12	32	41	28	30	23	12	11	15	9	12	9	14
Measles	1897	6180	5725	9903	451	201	936	1248	556	135	179	4328	1233	235	228

Ornithosis	-	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-
Plague	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rubella	166	2395	2060	668	799	444	1156	440	258	206	155	179	206	100	602		
Salmonellosis (other than typhoid or paratyphoid)	175	205	287	142	265	249	271	427	471	484	270	295	338	571	677		
Smallpox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetanus	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Tuberculosis	976	924	837	804	602	581	575	638	613	640	604	598	524	458	118		
Typhoid & Paratyphoid	2	4	3	1	1	-	2	-	2	4	3	1	1	4	4		
Typhus	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
Viral Haemorrhagic Disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viral Hepatitis Type A	184	237	255	201	126	212	261	564	538	205	414	369	94	133	312		
Viral Hepatitis Type B	26	53	33	57	55	63	32	20	11	15	13	11	20	11	10		
Viral Hepatitis Unspecified	1066	1192	1022	731	544	381	253	371	398	151	239	189	56	57	63		
Whooping Cough	1073	1728	3061	3689	1482	1717	1170	2217	798	841	860	869	363	436	257		
Yellow Fever	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Provisional figures

ITALY

(9 April 1997)

The Permanent Mission of Italy to the United Nations presents its compliments to the Secretariat of the United Nations and has the honour to submit to its Centre for Disarmament Affairs the attached information, provided by the Ministry of Foreign Affairs of Italy in accordance with paragraph 3 of Resolution 46/35 (A) concerning the Third Review Conference of the Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and their Destruction, held in Geneva in 1991

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare ^(*)
A, part 1	☐	☒
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐ SEE ENCLOSURE	☐
B (ii)	☒	☐
C	☐	☒
D	☒	☐
E	☐	☒
F	☐	☒
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)
April 1997

Date: _____ Italy

State Party to the Convention: _____

(*) ENCLOSURES ATTACHED IN PREVIOUS RETURNS
AND RE-ATTACHED FOR ILLUSTRATIVE PURPOSES

CONFIDENCE BUILDING MEASURE "A"Part I Exchange of data on research centre and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following

"Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialize in permitted biological activities directly related to the Convention "

Modalities

The Third Review Conference agreed that data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the 1983 WHO Laboratory Biosafety Manual such as those designated as biosafety level 4 (BL4) or P4 or equivalent standards

Form A, part 1Exchange of data on research centres and laboratories¹

1. Name (s) of facility² Laboratorio di Biologia Cellulare/
Servizio Biologico
2. Responsible public or Istituto Superiore di Sanità
private organization
or company
3. Location and postal V.le Regina Elena, 299
address 00161 ROMA
4. Source (s) of financing of the reported activity, including indication if the activity is
wholly or partly financed by the Ministry of Defence

Ministry of Health (entirely).
5. Number of maximum containment unit³ within the research centre and/or
laboratory, with an indication of their respective size (m²)

The P4 facility is approximately 100 square meters, consisting of: an area
containing a 70lt pilot-plant equipment and ultrafiltration devices, a service area
with sterilizer and a clothes-changing room with shower.
6. If no maximum containment unit, indicate highest level of protection

Not applicable
7. Scope and general description of activities, including type (s) of micro-organisms
and/or toxins as appropriate

Biomass and metabolites production by batch fermentation process. Development
of process schemes, recovery and study of cholera toxin and other substances of
health interest.

¹ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

² For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

³ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1Exchange of data on research centres and laboratories¹

1 Name (s) of facility:

CHEMICAL-PHYSICAL-BIOLOGICAL MILITARY
TECHNICAL CENTRE2 Responsible public or private
organization or company:

PUBLIC

3 Location and postal address:

CIVITAVECCHIA - VIA BRACCIANESE CLAUDIA
KM 67.54 Source(s) of financing of the reported activity, including indication if the activity is wholly or partly
financed by the Ministry of Defence:

TOTALLY FUNDED BY THE MINISTRY OF DEFENCE

5 Number of maximum containment units² within the research centre and/or laboratory, with an indication of
their respective size (mq):

6 If no maximum containment unit indicate highest level of protection:

B2 (SAFETY LABORATORY)

7 Scope and general description of activities, including type (s) of micro-organism and/or toxins as
appropriate:

A BIBLIOGRAPHIC STUDY HAS BEEN CARRIED OUT TO IDENTIFY THE MOST ADVANCED
DETECTION TECHNIQUES OF TYPE "B". WE ARE ALSO CONSIDERING THE POSSIBILITY OF
SETTING UP A LABORATORY FOR CELLULAR CULTURE SO AS TO TEST IN VITRO THE
TOXICITY OF SUSPECT AGENTS OF TYPE "B"
DECONTAMINATION TESTS ON MATERIAL.

¹ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

² For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "declared" in accordance with Form A, part 2 (iii).

³ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Part 2. Exchange of information on National Biological Defence Research and Development Program

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programs on biological defence, the States Parties will declare whether or not they conduct such programs. States Parties agreed to provide, annually, detailed information on their biological defence research and development programs, including summaries of the objectives and costs of efforts performed by contractors and in other facilities. If no biological defence research and development program is being conducted, a "null" report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

1. the objective and summary of the research and development activities under way, indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;
2. whether contractor or other non-defence facilities are utilised and the total funding provided to that portion of the program;
3. the organizational structure of the program and its reporting relationships; and
4. the following information concerning the defence and other governmental facilities in which the biological defence research and development program is concentrated:
 - a. locations;
 - b. the floor areas (sqm) of the facilities including that dedicated to each of BL-2, BL-3 and BL-4 level laboratories;
 - c. the total number of staff employed, including those contracted full-time for more than six months;
 - d. numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;
 - e. a list of the scientific disciplines of the scientific/engineering staff;
 - f. the source and funding levels in the following three areas: research, development, and test and evaluation; and
 - g. the policy regarding publications and a list of publicly available papers and reports.

Form A part 2 (i)

National Biological Defence Research and Development Program Declaration

- 1 Is there a national program to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research

YES

If the answer to (1) is YES, complete Form A part 2 (ii) which will provide a description of the program

Form A part 2 (iii)

National Biological Defence Research and Development Program

II Description

- 1 State the objectives and funding of the program and summarize the principal research and development activities conducted in the program. Areas to be addressed shall include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research

- DECONTAMINATION TESTS ON MATERIAL.
- HISTOPATHOLOGIC STUDIES BY ELECTRONIC AND OPTICAL MICROSCOPY (PATHOGENICITY AND VIRULENCE).
- DETECTION ON SPROUTING OF MOULDIES ON ARMY MATERIAL

- 2 State the total funding for the program and its source

FUNDS BY THE MINISTRY OF DEFENCE

- 3 Are aspects of this program conducted under contract with industry, academic institutions, or in other non-defence facilities?

NO

- 4 If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

//

- 5 Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para 4

//

- 6 Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program)

//

- 7 Provide a declarations in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

//

Form A, part 2 (iii)

National Biological Defence Research and Development Program

III Facilities

Complete on form for each facility declared in accordance with paragraph 7 in form A, part 2 (iii)

In shared facilities, provide the following information for the biological defence research and development portion only

1 What is the name of the facility?

CHEMICAL-PHYSICAL-BIOLOGICAL MILITARY TECHNICAL CENTRE

2 Where is it located (include both addresses and geographical location)?

VIA BRACCIANESE CLAUDIA Km 67.5 - 00053 Civitavecchia (ROMA) ITALY

3 Floor area of laboratory areas by containment level

BL2 700 (sqM)

BL3 (sqM)

BL4 (sqM)

Total Laboratory Floor Area 700 (sqM)

4 The organizational structure of each facility

I) Total number of personnel 6

II) Division of personnel

Military 2

Civilian 4

III) Division of personnel by category:

Scientists TECHNICAL OFFICERS 2

Engineers VETERINARY OFFICERS 0

Technicians 3

Support Staff 1

IV) List the scientific disciplines represented in the scientific/engineering staff. DEGREE IN BIOLOGICAL SCIENCE: N.2

V) Are contractor staff working in the facility? If so, provide an approximate number. NO

VI) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?
TOTALLY FUNDED BY THE MINISTRY OF DEFENCE

VII) What are the funding levels for the following program areas

Research

Development

Test and Evaluation

X

VIII) Briefly describe the publication policy of the facility

**HANDBOOKS AND PUBLICATIONS OF EXCLUSIVE USE OF THE MINISTRY OF
DEFENCE PERSONNEL**

IX) Provide a list of publically available paper and reports resulting from the work during the previous 12 months (To include authors, titles and full references)

//

5 Briefly describe the biological defence work carried out at the facility, including type(s) of microorganisms⁴ and/or toxins studied, as well as outdoor studies of biological aerosols

STUDIES ON SPROUTING OF MOULDIES ON VARIOUS MATERIALS

⁴ Including viruses and prions.

CONFIDENCE BUILDING MEASURE "B"

FORM B (i)

DISEASE

Malattie	1988	1989	1990	1991	1992	1993	1994	1995	*1996
Amebiasi	84	85	136	87	NN	NN	NN	NN	
Anchilostomiasi	4	1	13	11	NN	NN	NN	NN	
Bianorragia	501	488	528	487	447	372	330	317	
Botulismo	30	12	29	31	26	39	26	41	
Brucellosi	1275	1492	1571	1305	1192	1119	1314	1370	
Carbuncchio	7	13	6	6	NN	NN	NN	NN	
Congiuntivite	454	543	605	216	NN	NN	NN	NN	
Difterite	10	5	0	0	0	0	0	0	
Diarrea infettiva	77	95	130	896	1308	1550	1867	1612	
Echinococcosi	57	105	95	42	NN	NN	NN	NN	
Epatite A	1587	1295	2572	2764	6046	3308	3531	1434	7 262
Epatite B	4124	3915	3640	3260	3423	3344	2733	2800	1 635
Epatite NANB	1549	1510	1532	1580	1902	1788	1586	1455	**1163
Epatite non specificata	2852	1510	1883	1363	1724	982	551	401	
Febbre Q	35	14	21	11	NN	NN	NN	NN	
Febbre tifoide	1838	1471	1477	1394	1585	1194	1086	993	
Forme dermatofesimili	801	875	805	325	NN	NN	NN	NN	
Gastroenterite nel I° anno di vita	504	471	615	480	NN	NN	NN	NN	
Leishmaniosi	3	5	7	4	NN	NN	NN	NN	
Infezioni paratifi	884	1040	984	223	NN	NN	NN	NN	
Infezioni salmonelle	11226	13028	19587	8035	23348	23385	21350	14859	
Legionellosi	54	48	72	77	85	95	148	135	
Leishmaniosi cutanee	24	23	36	50	38	19	22	35	

1996: provisional data

CONFIDENCE BUILDING MEASURE "B"

FORM B (i)

DISEASE	1988	1989	1990	1991	1992	1993	1994	1995	*1996
Malattie									
Leishmaniosi visceral	54	61	49	67	110	90	95	144	
Leptospirosi	127	96	118	80	94	88	84	64	
Infogranuloma inguinale	8	6	5	3	NN	NN	NN	NN	
Meningite mening.	377	338	329	264	279	307	226	306	206
Micosi della cute	1459	1090	1080	444	NN	NN	NN	NN	
Mononucleosi infettiv	4034	4726	4824	2677	NN	NN	NN	NN	
Orbillo	92188	28214	5223	23458	65013	16890	8158	37131	29099
Rossella virale	504	461	463	226	NN	NN	NN	NN	
Riftosi	45	61	45	30	NN	NN	NN	NN	
Sottile epidemica	54233	42176	52841	41333	30185	29500	38438	65909	56375
Tifosse	9535	8524	16992	19356	7055	4246	13350	14359	3019
Tifolia	13798	81188	33579	14016	11146	33353	24332	8664	19763
Tifobia	2347	3009	1773	1773	NN	NN	NN	NN	
Tiflattina	16521	17788	14180	15487	18131	18777	19954	16892	
Tifide contagiosa	976	719	639	520	461	522	545	484	
Tifosi	253	193	205	93	NN	NN	NN	NN	
Tifano	119	105	123	88	92	90	102	136	104
Tifona	3052	2479	2267	NN	NN	NN	NN	NN	
Tifosantematico	0	0	0	0	0	0	0	0	
Tifosinfazioni alim.	1454	2253	1986	1023	NN	NN	NN	NN	
Tifoplasmosi	670	689	534	249	NN	NN	NN	NN	
Tifinosi	16	21	306	8	0	4	0	18	
Tifocolosi extrapol.	402	612	668	539	862	946	1083	1433	
Tifocolosi polire	3208	3384	3578	3180	3823	3788	4124	3879	
Tifemia	34	8	56	6	4	5	3	4	
Tifocella	88449	122486	88784	98152	116855	93855	109013	117730	

MINISAN - DIPARTIMENTO PREVENZIONE - Prevenzione Malattie infettive

*8 dati previsionari

Comprende anche casi di epatite non specificata

Confidence Building Measure "E"

Declaration of Legislation, Regulations and other Measures

With Law n. 185 of 9 July 1990 on "New provisions governing the export, import and transit of armament" Italy has reiterated her commitment not to manufacture weapons of mass destruction. Chapter 1, Section 1, point 7 of that Law reads "The manufacture, import, export and transit of biological, chemical and nuclear weapons are prohibited, as is research designed for their production or the provision of the relevant technology".

Legislation on the matter also comprises

- Decree of the Ministry of Foreign Trade of 14 July 1990;
- Decree of the Ministry of Foreign Trade of 30 October 1990;
- Law n. 222 of 27 February 1992.

CONFIDENCE BUILDING MEASURE "F"

- Declaration of past activities in offensive and/or defensive biological research and development programs

In the interest of increasing transparency and openness, States Parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programs since 1 January 1946

If so, States Parties shall provide information on such programs, in accordance with Form F

Form F

Declaration of past activities in offensive and/or defensive biological research and development program

1 Date of entry into force of the Convention for the State Party 30 MAGGIO 1975

2 Past offensive biological R and D programs

- NO

- Period(s) of activities /

- Summary of the R and D activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction program of such agents and weapons, and other related research

3 Past defensive biological R and D programs

- YES

- Period(s) of activities 91/92

- Summary of the R and D activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible

(NO CHANGE OF DECLARATION 1995)

THE CHEMICAL-PHYSICAL-BIOLOGICAL TECHNICAL CENTRE HAS CARRIED OUT STUDIES, EXPERIMENTS AND BIOGRAPHICAL UPDATING IN THE FIELD OF BIOLOGICAL DEFENSE

IN THIS CONTEXT

- DECONTAMINATION TESTS ON MATERIAL HAVE BEEN CARRIED OUT,
- HISTOPATHOLOGIC EFFECTS OF CBR AGENTS (IN PARTICULAR MUSTARD GAS AND MYCOTOXINS) ON TARGET ORGANS HAVE BEEN EXAMINED BY ELECTRONIC AND OPTICAL MICROSCOPY,
- STUDIES HAVE BEEN INITIATED ON THE POSSIBILITY OF USING CELLULAR CULTURES IN TOXICOLOGICAL RESEARCH.

CONFIDENCE BUILDING MEASURE "G"

Declaration of vaccine production facilities

ELENCO DELLE SOCIETÀ AUTORIZZATE A PRODURRE SERIE E VACCINI

1) **Aima Derivati S.P.A.**a) Stabilimento sito in S. Rufina
Cittaducale (RI)

b) Stabilimento sito in s.s. 7 km 19,5 S. Antimo Napoli

c) Stabilimento sito in Lungarno Galilei 2 Pisa

2) **Alfa Biotec s.p.a.**

Stabilimento sito in via della Castagnetta 7 Pomezia (RM)

3) **Biocine s.p.a.**

Stabilimento sito in via Fiorentina 3 a Siena

4) **Farma Biagini s.p.a.**

a) Stabilimento sito in S. Rufina Cittaducale (RI)

b) Stabilimento sito in Lungarno Galilei 2 Pisa

c) Stabilimento sito in s.s. 7 km 19,5 S. Antimo Napoli

5) **Immuno S.P.A.**

Stabilimento sito in via G. Oliva 2 Ospedaletto (PI)

6) **Istituto Behring s.p.a.**

Stabilimento sito in s.s. n°17, km 22 Scoppito (AQ)

7) **Istituto Sierovaccinogeno Italiano ISI s.p.a.**

a) Stabilimento sito in s.s. 7 km 19,5 S. Antimo Napoli

b) Stabilimento sito in S. Rufina Cittaducale (RI)

c) Stabilimento sito in Lungarno Galilei 2 Pisa

8) **Istituto Sierovaccinogeno Pozzi s.p.a.**

Stabilimento sito in via Cassia Nord Monteriggioni (SI)

9) **Sciavo S.P.A.**Stabilimento sito in località Bellaria di Rosia Sovicille
Siena

LUXEMBOURG

(10 April 1997)

Le Représentant Permanent du Luxembourg auprès de l'Organisation des Nations Unies présente ses compliments au Secrétaire Général de l'Organisation des Nations Unies et a l'honneur de communiquer au Centre pour les affaires de désarmement le rapport établi par le Luxembourg conformément à la déclaration finale de la Troisième Conférence des parties chargées de l'examen de la convention sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques (biologiques) ou à toxines et sur leur destruction.

Il n'y a pas de production d'armes biologiques au Luxembourg. Son territoire n'abrite aucun dépôt d'armes biologiques, ni aucune installation qui pourrait servir au développement de telles armes.

L'on voudra bien trouver en annexe les réponses au formulaire BWX/CONF.III/23.

ANNEXE

Mesures		Réponses
A,	partie 1	rien à déclarer
A,	partie 2 i)	rien à déclarer
A,	partie 2 ii)	rien à déclarer
A,	partie 2 iii)	rien à déclarer
B	i)	rien à déclarer
B	ii)	rien à déclarer
C		rien à déclarer
D		rien à déclarer
E,	a)	rien à déclarer
E,	b)	rien à déclarer
E,	c)	rien à déclarer
F		rien à déclarer
G		rien à déclarer

NEW ZEALAND

(15 April 1997)

New Zealand - Statement of complianceArticle I

New Zealand has never developed, produced, stockpiled or otherwise acquired or retained biological agents or toxins in quantities that have no justification for defence, or the weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

Article II

Article does not apply to New Zealand (see note under article I).

Article III

New Zealand is in full compliance with article III.

New Zealand implements controls on the transfer of goods which could be used for the development or production of biological weapons. All cases are treated on a case-by-case basis under regulations implemented by the Ministry of Foreign Affairs and Trade. Transfers for peaceful purposes are unaffected.

The New Zealand Government has alerted Government and private research laboratories to the possibility that they may receive requests from other countries for information or equipment that could be used for the production of biological weapons, and advised them of the likely characteristics of a suspicious request.

In addition, the New Zealand Government recently conducted a survey of Government and private research laboratories to gather information for the purposes of its Confidence Building Measures Declaration to the Biological Weapons Convention.

Only a few facilities in New Zealand deal with listed human, animal or plant pathogens.

Article IV

The New Zealand Nuclear Free Zone, Disarmament and Arms Control Act 1987 implements in New Zealand the Convention and specifically prohibits the manufacture, stationing, acquisition, possession or control of any biological weapon in New Zealand.

Article V

To date, New Zealand has not invoked the provisions of article V, nor have the provisions of article V been invoked in respect to New Zealand. New Zealand has participated fully in the confidence building measures established following the Second Review Conference and has made declarations under the scientific and technological data exchange every year since that time, declaring that New Zealand conducts no research related to any aspect of biological warfare including research for protective or defensive purposes, that there have been no outbreaks of infectious diseases and similar occurrences caused by toxins and that we have encouraged the publication of results and promotion of knowledge and contacts.

Articles VI and VII

New Zealand has not invoked the provisions of articles VI and VII, nor have the provisions of these articles been invoked against New Zealand.

Articles VIII and IX

New Zealand has signed the Chemical Weapons Convention which Enters Into Force on 29 April 1997. New Zealand supports the addition of verification measures to the Biological Weapons Convention.

Article X

The ability of New Zealand research and health workers to communicate with and exchange materials with colleagues overseas is not inhibited and is encouraged. New Zealand contributes biotechnology, training and scholarship assistance as part of its overseas development assistance for developing countries. Cooperation for peaceful purposes in New Zealand takes place with Government research institutions, semi-Government institutions, universities and the private sector primarily in the fields of medicine and public health, animal research and food technology. Results of all research are published in international and national scientific journals and at local and international conferences. Reference laboratory services are available to researchers and health workers in other countries, and materials are regularly exchanged with other countries particularly in the South Pacific.

Form B (i)

Human diseases:

Disease	1992	1993	1994	1995	1996
Acute Gastroenteritis	**	**	**	**	435
AIDS	**	**	44	50	76
Amoebiasis	**	**	**	14	5
Brucellosis	7	8	***	***	3
Campylobacter	5138	8101	7742	7514	7628
Cholera	**	**	**	2	**
Creutzfeldt Jakob disease	**	**	**	**	2
Giardia	2857	2885	**	**	898
Congenital Rubella	**	**	**	1	**
Cryptosporidiosis	**	**	**	**	110
Dengue fever	**	**	**	7	23
<i>E. Coli</i> 0157	**	**	**	**	8
Food poisoning	**	**	**	518	67
Haemophilus influenzae*	186	144	76	**	**
H. Influenzae type b	**	**	**	16	28
Hepatitis A	289	259	185	44	305
Hepatitis B	222	147	133	107	103
Hepatitis C	**	**	77	62	59
Hydatid disease	**	**	**	**	3
Influenza*	317	423	441	**	**
Legionellosis*	57	21	123	70	37
Leptospirosis	221	117	71	65	26
Leprosy	**	**	**	1	10
Listeriosis	14	8	12	15	10
Malaria	**	**	34	42	107
Measles*	60	6	3	**	54
Meningococcal disease	155	201	208	394	473
Mumps	**	**	**	**	63
Paratyphoid	**	**	**	11	19
Pertussiss	79	44	11	**	594
Psittacosis	**	**	**	2	**

Disease	1992	1993	1994	1995	1996
Puerperal infection	**	**	**	86	10
Rheumatic fever	70	78	100	92	107
Rubella*	**	**	108	**	259
Salmonellosis	1214	1240	1506	1352	1140
Shigellosis	120	124	167	191	168
Tetanus	**	**	**	**	3
Tuberculosis	312	367	359	396	358
Typhoid	13	12	24	21	15
Yersiniosis	**	**	**	**	247

* Laboratory reported cases only

** Statistics not available/recorded

*** Disease no longer considered to occur in New Zealand

Animal diseases:

Disease	1992	1993	1994	1995	1996
Psittacosis	19	0	12	3	low sporadic occurrence
Enzootic bovine leukosis	1	167	33	1	0
Tuberculosis (cattle, farmed deer)	**	7651	7337	4647	6042
Tuberculosis (pig, goat, cat, ferret)	180	**	**	**	**
Echinococcus (cattle, sheep)	51	5	**	**	**
Leptospirosis	480	27	27	**	**
Aujeszky's disease	0	0	26	4 outbreaks, all stamped out	0
Equine viral arteritis	0	0	0	0	0
Scrapie	0	0	0	0	0 (last occurred in 1954)
Bovine Spongiform encephalopathy	0	0	0	0	0 (never recorded)

* Laboratory reported cases only

** Statistics not available/recorded

*** Disease no longer considered to occur in New Zealand

At the Third Review Conference it was agreed that all States Parties present the following declaration:

Declaration form on Nothing to Declare or Nothing New to Declare for
in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☒	☐
A, part 2(i)	☒	☐
A, part 2(ii)	☒	☐
A, part 2(iii)	☒	☐
B (i)	☒	☐
B (ii)	☒	☐
C	☒	☐
D	☒	☐
E	☐	☒
F	☒	☐
G	☒	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 14 APRIL 1997

State Party to the Convention NEW ZEALAND.

NORWAY

(14 April 1997)

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☒	☐
B (ii)	☒	☐
C	☐	☒
D	☐	☒
E	☐	☒
F	☐	☒
G	☐	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: April 9, 1997

State Party to the Convention: Norway

1. CONFIDENCE-BUILDING MEASURE "A":

Part 1: Exchange of data on research centres and laboratories

At the Third Review Conference it was agreed that States Parties continue to implement the following:

"Exchange of data, including name, location, scope and general description of activities, on research centres and laboratories that meet very high national or international safety standards established for handling, for permitted purposes, biological materials that pose a high individual and community risk or specialize in permitted biological activities directly related to the Convention."

Modalities

The Third Review Conference agreed that data should be provided by States Parties on each facility, within their territory or under their jurisdiction or control anywhere, which has any maximum containment laboratories meeting those criteria for such maximum containment laboratories as specified in the 1983 WHO Laboratory Biosafety Manual such as those designated as biosafety level 4 (BL4) or P4 or equivalent standards.

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ Norwegian Defence Microbiological Laboratory
2. Responsible public or private organisation or company Department of Defence
HQ Defence Command Norway
Joint Medical Service
3. Location and postal address Geitmyrsveien 75, Oslo
This location is within the
confinement of the National
Institute of Public Health
P.O. Box 4302 Torshov
N-0401 Oslo
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence
Wholly by the Ministry of Defence
5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m²)
No BL-4 175 M³ BL-3
6. If no maximum containment unit, indicate highest level of protection
BL-3
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate
Tularemia, Yersinia, Anthrax, Chlamydia
Toxins: Staphylococcal, Shigella-, Clostridial-,
Bacillus cereus
Activities: - Pathogenicity studies
- Diagnostic work (detection)
 - 1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
 - 2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
 - 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Part 2: Exchange of information on national biological defence research and development programmes

At the Third Review Conference it was agreed that States Parties are to implement the following:

In the interest of increasing the transparency of national research and development programmes on biological defence, the States Parties will declare whether or not they conduct such programmes. States Parties agreed to provide, annually, detailed information on their biological defence research and development programmes including summaries of the objectives and costs of effort performed by contractors and in other facilities. If no biological defence research and development programme is being conducted, a "null" report will be provided.

States Parties will make declarations in accordance with the attached forms, which require the following information:

- (1) the objective and summary of the research and development activities under way indicating whether work is conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research;
- (2) whether contractor or other non-defence facilities are utilized and the total funding provided to that portion of the programme;
- (3) the organizational structure of the programme and its reporting relationships; and
- (4) the following information concerning the defence and other governmental facilities in which the biological defence research and development programme is concentrated:
 - (a) location;
 - (b) the floor areas (sqm) of the facilities including that dedicated to each of BL2, BL3 and BL4 level laboratories;
 - (c) the total number of staff employed, including those contracted full time for more than six months;
 - (d) numbers of staff reported in (c) by the following categories: civilian, military, scientists, technicians, engineers, support and administrative staff;
 - (e) a list of the scientific disciplines of the scientific/engineering staff;
 - (f) the source and funding levels in the following three areas: research, development, and test and evaluation; and
 - (g) the policy regarding publication and a list of publicly-available papers and reports.

Form A, part 2National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

☒ Yes, ☐ No

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Form A, part 2 (ii)National biological defence research and development programme

Description

1. State the objectives and funding of the programme and summarize the principal research and development activities conducted in the programme. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

2. State the total funding for the programme and its source.

Are aspects of this programme conducted under contract with industry, academic institutions, or in other non-defence facilities?

Yes/No

4. If yes, what proportion of the total funds for the programme is expended in these contracted or other facilities?

5. Summarize the objectives and research areas of the programme performed by contractors and in other facilities with the funds identified under paragraph 4.

6. Provide a diagram of the organizational structure of the programme and the reporting relationships (include individual facilities participating in the programme).

7. Provide a declaration in accordance with Form A, part 2 (iii) for each facility, both governmental and non-governmental, which has a substantial proportion of its resources devoted to the national biological defence research and development programme, within the territory of the reporting State, or under its jurisdiction or control anywhere.

Form A, part 2 (i)National biological defence research and development programmeFacilities

Complete a form for each facility declared in accordance with paragraph in Form A, part 2 (ii).

In shared facilities, provide the following information for the biological defence research and development portion only.

1. What is the name of the facility?

Norwegian Defence Microbiological Laboratory

2. Where is it located (include both address and geographical location)?

Address: P.O. Box 4302 Torshov, N-0401 Oslo
Oslo, Norway: Geitmyrsveien 75,

3. Floor area of laboratory areas by containment level:

BL2 175 (sqm)

BL3 175 (sqm)

BL4 _____ (sqm)

Total laboratory floor area 350 (sqm)

4. The organizational structure of each facility.

(i) Total number of personnel

12

(ii) Division of personnel:

Military

5

Civilian

5

(iii) Division of personnel by category:

Scientists

2

Engineers

4

Technicians

3

Administrative and support staff

1

- (iv) List the scientific disciplines represented in the scientific/engineering staff.

Medicine and Veterinary Microbiologists

- (v) Are contractor staff working in the facility? If so, provide an approximate number.

No

- (vi) What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defence?

Wholly by the Ministry of Defence

- (vii) What are the funding levels for the following programme areas:

Research	US \$ 100.000
Development	US \$ 100.000
Test and evaluation	US \$ 100.000

- (viii) Briefly describe the publication policy of the facility:
Open international reviews

- (ix) Provide a list of publicly-available papers and reports resulting from the work during the previous 12 months. (To include authors, titles and full references.)

Briefly describe the biological defence work carried out at the facility, including type(s) of micro-organisms * and/or toxins studied, as well as outdoor studies of biological aerosols.

Basic research on chlamydia and frabacisella

* Including viruses and prions. Diagnostic on toxins from staf., Shigella, Clostridia
Diagnostic on Tularemia, Yersinia, Anthrax, Chlamydia psittaci, Salmonella typhi

3. CONFIDENCE-BUILDING MEASURE "B":

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins

At the Third Review Conference it was agreed that States Parties continue to implement the following:

Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins, and on all such events that seem to deviate from the normal pattern as regards type, development, place, or time of occurrence. The information provided on events that deviate from the norm will include, as soon as it is available, data on the type of disease, approximate area affected, and number of cases.

Modalities

The Third Review Conference agreed the following definition:

An outbreak or epidemic is the occurrence of an unusually large or unexpected number of cases of an illness or health-related event in a given place at a given time. The number of cases considered as unusual will vary according to the illness or event and the community concerned.

Furthermore, reference was made to the following definitions:

An epidemic of infectious disease is defined as the occurrence of an unusually large or unexpected number of cases of a disease known or suspected to be of infectious origin, for a given place and time. It is usually a rapidly evolving situation, requiring a rapid response (WHO internal document CDS/Mtg/82.1).

The occurrence in a community or region of cases of an illness, specific health-related behaviour, or other health-related events clearly in excess of normal expectancy. The community or region, and the time period in which the cases occur, are specified precisely. The number of cases indicating the presence of an epidemic will vary according to the agent, size and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence: epidemicity is thus relative to usual frequency of the disease in the same area, among the specified population, at the same season of the year. A single case of a communicable disease long absent from a population or first invasion by a disease not previously recognised in that area requires immediate reporting and full field investigation: two cases of such a disease associated in time and place may be sufficient evidence to be considered an epidemic. (J.M. Last, A Dictionary of Epidemiology, Oxford University Press, New York, Oxford, Toronto, 1983.)

The Third Review Conference agreed on the following:

1. In determining what constitutes an outbreak States Parties are recommended to take guidance from the above.

2. Since no universal standards exist for what might constitute a deviation from the normal pattern, States Parties agreed to utilize fully existing national reporting systems on human diseases as well as animal and plant diseases, where possible, and systems within the WHO to provide annual update of background information on diseases caused by organisms which meet the criteria for risk groups II, III and IV according to the classification in the 1983 WHO Laboratory Biosafety Manual, the occurrence of which, in their respective areas, does not necessarily constitute a deviation from normal patterns *.

3. Exchange of data on outbreaks that seem to deviate from the normal pattern is considered particularly important in the following cases:

- when the cause of the outbreak cannot be readily determined or the causative agent ** is difficult to diagnose,
- when the disease may be caused by organisms which meet the criteria for risk groups III or IV, according to the classification in the 1983 WHO Laboratory Biosafety Manual,
- when the causative agent is exotic to a given region,
- when the disease follows an unusual pattern of development,
- when the disease occurs in the vicinity of research centres and laboratories subject to exchange of data under item A,
- when suspicions arise of the possible occurrence of a new disease.

4. In order to enhance confidence, an initial report of an outbreak of an infectious disease or a similar occurrence that deviate from the normal pattern should be given promptly after cognisance of the outbreak and should be followed up by annual reports.

To enable States Parties to follow a standardized procedure, the Conference has agreed that Form B (ii) should be used, to the extent information is known and/or applicable, for the exchange of initial as well as annual information.

5. In order to improve international cooperation in the field of peaceful bacteriological (biological) activities and in order to prevent or reduce the occurrence of ambiguities, doubts and suspicions, States Parties are encouraged to invite experts from other States Parties to assist in the handling of an outbreak, and to respond favourably to such invitations.

* This information should be provided in accordance with Form B (i).

** It is understood that this may include organisms made pathogenic by molecular biology techniques, such as genetic engineering.

Form 3 (1)

Background information on outbreaks of reportable
infectious diseases

Disease	Number of cases per year				
	1993	1994	1995	1996	1997
<u>Norway:</u> There have been no unusual outbreaks for any of these years, in 1996 Within "unusual outbreaks" we consider human, animal as well as plant disease.					

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern

- 1. Time of cognizance of the outbreak
- 2. Location and approximate area affected
- 3. Type of disease/intoxication
- 4. Suspected source of disease/intoxication
- 5. Possible causative agent(s)
- 6. Main characteristics of systems
- 7. Detailed symptoms, when applicable
 - respiratory Nothing to declare from Norway
 - circulatory
 - neurological/behavioural
 - intestinal
 - dermatological
 - nephrological
 - other
- 8. Deviation(s) from the normal pattern as regards
 - type
 - development
 - place of occurrence
 - time of occurrence
 - symptoms
 - virulence pattern

- drug resistance pattern
- agent(s) difficult to diagnose
- presence of unusual vectors
- other
- 9. Approximate number of primary cases
- 10. Approximate number of total cases
- 11. Number of deaths
- 12. Development of the outbreak
- 13. Measures taken

1. CONFIDENCE-BUILDING MEASURE "C":

- Encouragement of publication of results and promotion of use of knowledge

At the Third Review Conference it was agreed that States parties continue to implement the following:

"Encouragement of publication of results of biological research directly related to the Convention, in scientific journals generally available to States parties, as well as promotion of use for permitted purposes of knowledge gained in this research."

Modalities

The Third Review Conference agreed on the following:

1. It is recommended that basic research in biosciences, and particularly that directly related to the Convention should generally be unclassified and that applied research to the extent possible, without infringing on national and commercial interests, should also be unclassified.
 2. States parties are encouraged to provide information on their policy as regards publication of results of biological research, indicating, inter alia, their policies as regards publication of results of research carried out in research centres and laboratories subject to exchange of information under item A and publication of research on outbreaks of diseases covered by item B, and to provide information on relevant scientific journals and other relevant scientific publications generally available to States parties.
 3. The Third Review Conference discussed the question of cooperation and assistance as regards the safe handling of biological material covered by the Convention. It concluded that other international forums were engaged in this field and expressed its support for efforts aimed at enhancing such cooperation.
3. CONFIDENCE-BUILDING MEASURE "D":
- Active promotion of contacts

At the Third Review Conference it was agreed that States parties continue to implement the following:

"Active promotion of contacts between scientists, other experts and facilities engaged in biological research directly related to the Convention, including exchanges and visits for joint research on a mutually agreed basis."

Modalities

The Third Review Conference agreed on the following:

In order to actively promote professional contacts between scientists, joint research projects and other activities aimed at preventing or reducing the occurrence of ambiguities, doubts and suspicions and at improving international cooperation in the field of peaceful bacteriological (biological) activities, States parties are encouraged to provide information to the extent possible:

- on planned international conferences, seminars, symposia and similar events dealing with biological research directly related to the Convention,
- on other opportunities for exchange of scientists, joint research or other measures to promote contacts between scientists engaged in biological research directly related to the Convention.

To enable States parties to follow a standardized procedure, the Third Review Conference has agreed that Form D should be used for exchange of information under this item.

Form DActive promotion of contacts1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc.
- arranging organisation(s), etc.
- time
- place NORWAY
- main subject(s) for the conference, etc. NONE PLANNED
-
- conditions for participation
-
- point of contact for further information, registration, etc.
-
-

2. Information regarding other opportunities

.....

.....

.....

6. CONFIDENCE-BUILDING MEASURE "E"

- Declaration of legislation, regulations and other measures

At the Third Review Conference the States parties agreed to implement the following:

As an indication of the measures which they have taken to implement the Convention, States parties shall declare whether they have legislation, regulations or other measures:

(a) to prohibit the development, production, stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery, specified in Article I of the Convention, within their territory or anywhere under their jurisdiction or control;

(b) in relation to the export or import of micro-organisms pathogenic to man, animals and plants or of toxins in accordance with the Convention;

States parties shall complete the attached form (Form E) and shall be prepared to submit copies of the legislation or regulations, or written details of other measures on request to the United Nations Department for Disarmament Affairs or to an individual State party. On an annual basis States parties shall indicate, also on the attached form, whether or not there has been any amendment to their legislation, regulations or other measures.

Form IDeclaration of legislation, regulations and other measuresRelating to

Legislation Regulations Other Amended since
measures last year

- (a) Development, production
 stockpiling, acquisition
 or retention of microbial
 or other biological agents,
 or toxins, weapons, equip-
 ment and means of delivery
 specified in Article I

YES/NO

YES/NO

YES/NO

YES/NO

- (b) Exports of micro-organisms*
 and toxins

YES/NO

YES/NO

YES/NO

YES/NO

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

7. CONFIDENCE-BUILDING MEASURE "F":

- Declaration of past activities in offensive and/or defensive biological research and development programmes

In the interest of increasing transparency and openness, States parties shall declare whether or not they conducted any offensive and/or defensive biological research and development programmes since 1 January 1946.

If so, States parties shall provide information on such programmes, in accordance with Form F.

Form FDeclaration of past activities in offensive and/or defensive biological research and development programmes

1. Date of entry into force of the Convention for the State party.
2. Past offensive biological research and development programmes:
 - YES - ☒ NO
 - Period(s) of activities
 - Summary of the research and development activities indicating whether work was performed concerning production, test and evaluation, weaponization, stockpiling of biological agents, the destruction programme of such agents and weapons, and other related research.
3. Past defensive biological research and development programmes:
 - YES - ☒ NO
 - Period(s) of activities
 - Summary of the research and development activities indicating whether or not work was conducted in the following areas: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination, and other related research, with location if possible.

re 3: there has of course been work done in various laboratories, but only work related to human or animal disease as such, and nothing bearing on what is understood as a biological programme related to defence activities. To illustrate this, all work, biological, that has been performed in Norway by military, public health, university, or other official facilities, has been published in open international or national papers.

8. CONFIDENCE-BUILDING MEASURE "G"**- Declaration of vaccine production facilities**

To further increase the transparency of biological research and development related to the Convention and to broaden scientific and technical knowledge as agreed in Article X, each State party will declare all facilities, both governmental and non-governmental, within its territory or under its jurisdiction or control anywhere, producing vaccines licensed by the State party for the protection of humans. Information shall be provided on Form C attached.

See form "C"

Form GDeclaration of vaccine production facilities

1. Name of facility:
2. Location (mailing address):
3. General description of the types of diseases covered:

Alpharma vaccines -

Production site: N-7863, Overhalla. Vaccines for fish farming purposes, against salmon vibriosis and salmon furunculosis. Additionally, vaccines against Trichophyto fungal cattle infection, and against listeriosis in small cattle (sheep, goat).

The National Veterinary Institute -

Production site: Ullevålsveien 68, N-0454 Oslo. Produce small quantities of autogenous vaccines, as well as against Mycobacterium paratuberculosis infection in the goat, and various anti-staphylococcal vaccines for animal use.

The National Institute of Public Health, department of vaccine production -

Production site: Geitmyrsveien 75, 0462 Oslo. Pre-production of vaccine against human Neisseria meningitidis type B - infection.

Norbio -

Production site: Ullandhaug, 4019 Stavanger. Has no actual production licence, but is in possession of fermentation equipment.

POLAND

(30 April 1997)

The Permanent Representative of the Republic of Poland to the United Nations presents his compliments to the Secretary-General of the United Nations and has the honour to enclose herewith the data and information on the measures instituted by the Government of the Republic of Poland in conformity with the following UNGA resolutions:

- a) 51/38 - Objective information on military matters, including transparency of military expenditures - annex No 1;
- b) 46/36L and 51/45H - Transparency in armaments - annex No 2;
- c) 51/54 - Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction - annex No 3.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2 (i)	☐	☒
A, part 2 (ii)	☐	☒
A, part 2 (iii)	☐	☒
B (i)	☐	☒
B (ii)	☐	☒
C	☐	☐
D	☐	☐
E	☐	☒
F	☐	☒
G	☒	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: 1997, April 11

State Party to the Convention: POLAND (Polish Army)

Form A, part 1

Exchange of data on research centres and laboratories 1/

1. Name(s) of facility 2/ _____
2. Responsible public or private organization or company _____
3. Location and postal address _____
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence

5. Number of maximum containment units 3/ within the research centre and/or laboratory, with an indication of their respective size (m²)

6. If no maximum containment unit, indicate highest level of protection

7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate

1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.

2/ For facilities with maximum containment units participating in the national biological defence research and development programme, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".

3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A. part 2 (i)National biological defence research and development programme Declaration

Is there a national programme to conduct biological defence research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a programme would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Yes ☒ No

If the answer is Yes, complete Form A, part 2 (ii) which will provide a description of the programme.

Ad. 4 CONFIDENCE - BUILDING MEASURE „C”

Publications 1996A. Articles

Sakiel S., Grzybowski J.: Clinical application of collagen membranes in treatment of burn wounds. *Polim. Med.* 1995, 25, 19-24.

Antos M., Trafny E.A., Grzybowski J.: The influence of *Pseudomonas aeruginosa* on liposomes. *Folia Microbiol.* 1996, 41, 29-32.

Trafny E.A., Grzybowski J., Olszowska-Golec M., Antos M., Strużyna J.: Antipseudomonal activity of collagen sponges with liposomal polymyxin B. *Pharmacol. Res.*, 1996, 33, 63-65.

Grzybowski J., Antos M., Trafny E.A.: A simple in vitro model to test the efficacy of topical antimicrobial agents released from dressings. *J. Pharmacol. Toxicol. Meth.* 1996 (in press).

Trafny E.A., Antos-Bielka M., Grzybowski J.: In vitro activity of liposomal polymyxin B incorporated into collagen sponge. *Cell. Mol. Biol. Letters* 1996, 1 (in press).

Antaszkowski M., Grzybowski J., Tederko A., Braczko M.: Collagen membranes with enhanced absorption activity as an antiseptics carriers. *Polim. Med.*, 1996, 26, Nr 3/4 (in press, in Polish).

Reiss J., Mądry R.: Preliminary data on registration of nosocomial infections affecting military hospitals. *Lek. Wojsk.* 1996, (in press, in Polish).

Bany J., Golińska Z., Lach J.: Biological monitoring of lead toxicity on mice model infected with *Trichinella spiralis*. *Pol. J. Environm. Studies*, 1996, Suppl. 5.

Golińska Z.: Human parasitic diseases disseminated by food. *Lek. Wojsk.* 1996, page 11-12 (in Polish).

Lach J., Duk L.: Epidemiological studies on parasitic infestation of alimentary tract of soldiers. *Lek. Wojsk.* 1996, 3-4, 128-132 (in Polish).

Mierzejewski J., Bartoszcze M.: Gruinard Island: one of many. *The ASA Newsletter* 1996, April 12, 53, 8.

Mierzejewski J., Bartoszcze M.: Anthrax in Swierdlów - secondary epidemiological examination. *Lek. Wojsk.* 1996, 72, 325-329 (in Polish).

Mierzejewski J., Bartoszcze M.: II International Seminarium on Anthrax. *Lek. Wojsk.* 1996, 72, 351-352 (in Polish).

Mierzejewski J.: Veterinary catastrophe in light of American authors. *Lek. Wojsk.* 1996, 72, 448-451 (in Polish).

Palec W.: Toxin occurrence time in relation to sensorial in meat cans contaminated with *Clostridium botulinum* Type B endospores. *Acta Microbiol. Polonica* 1996, 45, 75-83.

Przybylszcwaka M., Matras J., Górecka M., Knap J., Bartoszcze M., Mierzejewski J.: Dermal anthrax, probably originating from a XV th century goat leather „cordovan” and apparently attributable to a non-capsulating *Bacillus anthracis*. *Proceeding of the International Workshop on Anthrax, Winchester, England 1995. Special Supplement 1996, No 87, 21*

B. Communications

Lasocki K., Szpakowska M., Graczyk A., Grzybowski J.: Sensitivity of *Pseudomonas aeruginosa* and *Staphylococcus aureus* to a photodynamic effect of the arginine hematoporphyrin derivative (HpD-arg2). *First European Congress of Chemotherapy, Glasgow, May, 1996.*

Trafny E.A., Grzybowski J., Kowalaka K.: Protection of collagenous biomaterial by antimicrobials from *Pseudomonas aeruginosa* colonization. *First European Congress of Chemotherapy, Glasgow, May, 1996.*

Trafny, E.A., Antos-Bielaka M., Grzybowski J.: Liposomal polymyxin B incorporated into collagen sponge and its antibacterial activity. *Liposomes in biology and medicine, Wrocław/Jarnołtówek, June 1996.*

Grzybowski J., Sikorski J., Kurmanow J.: Evaluation of collagen membranes as biological dressings. *5th International Conference on Tissue Banking, Berlin, september 1996.*

Trafny E.A.: Comparison of the antibacterial agents concentration required to kill adherent and planktonic *Pseudomonas aeruginosa*. *XII International Conference "Diagnostics of Microbiology" Puławy, June 1996.*

Szpakowska M., Lasocki K., Grzybowski J., Reiss J., Graczyk A.: Sensitivity of the bacterial strains isolated from burn wounds to a photodynamic effect of the arginine hematoporphyrin derivative (HpD-arg2). *XII International Conference "Diagnostics in Microbiology" Puławy, June 1996.*

Gall W.: Epidemiological aspects of nosocomial infections. *Conference "Nosocomial Infections", Military Institute Hygiene and Epidemiology, Warsaw November 1996 (in Polish).*

Reiss J., Grzybowski J.: Definition of hospital infection. *Conference „Nosocomial Infections”, Military Institutr Hygiene and epidemiology, Warsaw November 1996 (in Polish).*

Pfeffer M.: Control of hospital infections according to International Federation on Infection Control. *Conference "Nosocomial Infection", Military Institute Hygiene and Epidemiology, Warsaw November 1996 (in Polish).*

Arcinich H., Bartoszcze M., Trudil D., Matras J.: Luminometry of bacterial ATP in milk. Proceedings of Fourth Asept. International Conference, Laval - France 1996, page 356.

Bartoszcze M., Arcinich H.: Luminometry in microbiology. XII Conference "Diagnostics in Microbiology" Roczniki WIHE 1996, 32 supl. 1

Bartoszcze M., Arcinich H., Chomiczewski K., Matras J.: Some problems concerning application of luminometric method for the detection of *Bacillus anthracis* spores. Conference on Chemical And Biological Defense Research, Edgewood 1996.

Form 2 (1)

Active promotion of contacts1. Planned international conferences, symposia, seminars, and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. (XIV) Microbiological Diagnostics
- arranging organization(s), etc. Military Institute Hygiene and Epidemiology
- time June 17..1997.
- place Puław /Poland/
- main subject(s) for the conference, etc. New methods of microbiological indication and identification
- conditions for participation open for specialists in microbiology of medicine, veterinary, food and environment
- point of contact for further information, registration, etc. Centre of Military Institute Hygiene and Epidemiology
ul. Lubelska 2.....
24-100 Puław
tel. /081/ 86-30-21
fax /081/ 86-28-22

2. Information regarding other opportunities

.....

.....

.....

Form D

(2)

Active promotion of contacts1. Planned international conferences, symposia, seminars and other similar forums for exchange

For each such event, the following information should be provided:

- name of the conference, etc. NATO Advanced Research Workshop
- arranging organisation (s), etc. Military Institute Hygiene and Epidemiology (Poland) together with U.S. Army Edgewood RDE Center.
- time 19 - 22 May, 1997
- place "Staszic Palace", Warsaw, Poland
- main subject (s) for the conference, etc. Monitoring the Environment for Biological Hazards
- conditions for participation open for biologists, biochemists and specialists in microbiology of medicine, veterinary, food and environment
- point of contact for further information, registration, etc. Military Institute Hygiene and Epidemiology, ul. Koszalka 4, 01-163 Warsaw, Poland, tel/fax (0-22) 38-10-69

2. Information regarding other opportunities

..... Some planned references of Conference: Technologies for monitoring BWC; Problems concerning biological threats; *Classical techniques*: Dorman forms of bacteria; Subsurface environments-model for detection of relevance to exobiology; *Classical methods of measurements*: Toxin measurement; Biosensors; DNA-probes; Future of luminometric methods in biological detection; Rapid methods for monitoring food and the environment; Biodetection by next generation mass spectrometry techniques; Ultra-sensitive protein assay; Characterisation of microorganisms from the hyperspectral data; *Aerobiology*: Methodology for the generation and measurement of aerosols; Air sampling techniques; Use of aerosol techniques for the immunological study of *P.tularensis*; Sampling of biological aerosols; Test methodology for biological aerosols; *Emerging technology*: Design Characteristics of flow cytometers; Application of flow cytometry to biological

detection; A portable flow cytometer for detection and identification microorganisms; Application of flow cytometry to toxicological studies; Biodetection technologies in environmental monitoring; A system for the remote control and monitoring of sensors and sampling equipment; *DNA Probes*: Monitoring waterborne pathogens using DNA probes; Evaluation of 5' nuclease fluorogenic PCR assay for identification of biological agents; Light cycler and confocal microscopy to detect specific PCR products; Specific detection of Monkeypox Virus; Single strand conformation polymorphism for detection of pathogens; Impact of DNA probes for environmental analysis; *Applications*: Rapid method for bacterial counting in milk by using biosensor based on *E.coli* cells; Application of ion mobility technology to biological detection; Comparative performance of conventional and advanced molecular methods for environmental exposure of biological aerosols.

Additionally many posters will be presented.

Form E

Declaration of legislation, regulations and other measures

<u>Relating to</u>	<u>Legislation</u>	<u>Regulations</u>	<u>Other measures</u>	<u>Amended since last year</u>
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equip- ment and means of delivery specified in Article I	YES/NO	YES/NO	YES/NO	YES/NO
(b) Exports of micro-organisms* and toxins	YES/NO	YES/NO	YES/NO	YES/NO
(c) Imports of micro-organisms* and toxins	YES/NO	YES/NO	YES/NO	YES/NO

* Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

ROMANIA

(15 April 1997)

The Permanent Mission of Romania to the United Nations presents its compliments to the United Nations Secretariat - The Office for Disarmament Affairs and, in accordance with the Decision of the Third Review Conference of the Parties to the Convention on the Prohibition of Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (BWC), reaffirmed at the Forth Review Conference of the BWC, has the honour to transmit herewith the Report of Romania regarding the implementation of the BWC.

Declaration Form
on Nothing to Declare or Nothing New to Declare
for Use in the Information Exchange

MEASURE	NOTHING TO DECLARE	NOTHING NEW TO DECLARE
A, part 1		
A, part 2 (i)	X	
A, part 2 (ii)	X	
A, part 2 (iii)	X	
B (i)		
B (ii)		
C		
D		
E		
F	X	
G		X

Date: April 15, 1997

State Party to the Convention: ROMANIA

Form A, part 1

Exchange of data on research centers and laboratories

- | | |
|---|--|
| 1. Name(s) of the research center and/or laboratory | Medico-Military Center of Army

*Antiinfection protection laboratory

*Epidemiological emergencies team |
| 2. Responsible public or private organization or company | Ministry of National Defence |
| 3. Location and postal address | C.A.Rosetti Street, no.37, sector 1, P.O. Box 160, Bucharest, R-70100 |
| 4. Source(s) of financing | Ministry of National Defence |
| 5. Number of maximum containment units (m ²) ^x | No unit P ₃ level protection |
| 6. Highest level of protection | P ₂ about 520 m ² |
| 7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate | The laboratory undertakes research and diagnosis of infectious diseases in human beings, develops methods for prophylaxy and treatment against diseases caused by pathogenic agents: V. cholerae, Rickettsiae, Salmonella, arboviruses, Staphylococcic; products for supervising the prohibition, non-proliferation and destruction of biological weapons; intervention into unusual epidemic outbreaks. |

^x In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent.

Form A, part 1

Exchange of data on research centers and laboratories

- | | |
|--|--|
| 1. Name(s) of the research center and/or laboratory | "Cantacuzino" Institute |
| 2. Responsible public or private organization or company | Ministry of Public Health |
| 3. Location and postal address | Spl.Independentei, no. 103
Bucharest, 70.100 |
| 4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence | Self sustained
(non-profit institution)
No financing by the Ministry of Defence |
| 5. Number of maximum containment units within the research center and/or laboratory with an indication of their respective size (m ²)* | P protection unit: 16 m ² /
1 laboratory vaccine production unit |
| 6. If no maximum containment unit, indicate highest level of protection | NA |
| 7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate | 1) Basic and applied research programmes in bacteriology, virology and parasitology.
2) Research in epidemiological programmes studies and surveys.
3) Applied research programmes for vaccine and sera production development
4) Applied research on diagnostic methods and methodologies in microbial diseases.
5) Production of vaccines (bacterial and viral), sera (for treatment and diagnostic purposes), immunomodulators, allergens and reagents for microbiological diagnostics
6) Training in Microbiology and Immunology. |

* In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

Form A, part 1

Exchange of data on research centers and laboratories

- | | |
|--|---|
| 1. Name(s) of the research center and/or laboratory | Institute of Virology
St. Nicolau |
| 2. Public institution or private organization or company | Public Institution |
| 3. Location and postal address | Mihai Bravu Street, 283-285
Bucharest, 79650 |
| 4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence | Budget |
| 5. Number of maximum containment units within the research center and/or laboratory with an indication of their respective size (m ²)* | No P ₁ and P ₂ unit |
| 6. If no maximum containment unit, indicate highest level of protection | P ₂ is the highest level of protection |
| 7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate | Basic and applied virological research and diagnosis of viral infections in man |

* In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

Form A, part 1

Exchange of data on research centers and laboratories

- | | |
|--|---|
| 1. Name(s) of the research center and/or laboratory | Institute of Hygiene and Public Health |
| 2. Responsible public or private organization or company | Ministry of Public Health |
| 3. Location and postal address | Dr. Leonte Street, no. 1-3
Sector 5, Bucharest, 76256 |
| 4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence | Ministry of Health
No financing by the Ministry of Defence |
| 5. Number of maximum containment units within the research center and/or laboratory with an indication of their respective size (m ²)* | No P ₄ and P ₃ |
| 6. If no maximum containment unit, indicate highest level of protection | P ₂ is the highest level of protection |
| 7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate | <ul style="list-style-type: none">- Food and environmental microbiological control- Laboratory diagnosis in food borne diseases- Training in above mentioned fields |

* In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent

Form A, part 1

Exchange of data on research centers and laboratories

- | | |
|--|---|
| 1. Name(s) of the research center and/or laboratory | Pasteur National Institute for Veterinary Medicine |
| 2. Responsible public or private organization or company | Company with state capital under the authority of Ministry of Agriculture and Food |
| 3. Location and postal address | Calea Giulesti, no. 333, sector 6, Bucharest, 77826 |
| 4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence | Self sustained. It is not financed wholly or partly by the Ministry of National Defence |
| 5. Number of maximum containment units within the research center and/or laboratory with an indication of their respective size (m ²)* | No unit P ₄
One unit P ₃ (264 m ²)
20 units P ₁ and P ₂
protection level (9000 m ²) |
| 6. If no maximum containment unit, indicate highest level of protection | P ₃ is the highest level of protection |
| 7. Scope and general description of activities, including type(s) microorganisms and/or toxins as appropriate. | Research in veterinary medicine and production of biological and veterinary use:
- Research on diagnosis and prevention of infectious, parasitic and metabolic diseases in farm animals;
- Research in veterinary applied bacteriology, virology and parasitology;
- Research in applied veterinary immunology;
- Research on production and improvement of vaccines, hyperimmune sera and diagnostic reagents of veterinary use; |

* In accordance with the 1993 WHO Laboratory Biosafety Manual, or equivalent.

- Production on industrial scale of vaccines, hyperimmune sera and diagnostic reagents of veterinary drugs;

Microorganisms and/or toxins used:

- * *Bacillus anthracis*
- * *Pseudomonas mallei*
- * *Clostridium tetani*
- * *Leptospira* spp.
- * *Brucella* spp.
- * *Salmonella* spp.
- * Rabies virus
- * Swine fever virus
- * Foot-and-mouth virus
- * Newcastle disease virus

Form B (i)

Background information on morbidity of reportable
infectious diseases in 1996

HUMAN DISEASES

Disease	Morbidity
Anthrax	0.02
Botulism	0.15
Chickenpox	242.20
Cholera	-
Diphtheria	-
Dysentery	24.06
Food Borne diseases	13.20
Influenza	476.03
Leptospiroses	1.02
Lues	32.19
Malaria	0.22
Measles	4.01
Meningitis	1.01
Mumps	127.21
Poliomyelitis	0.02
Q. Fever	0.01
Rabies	0.01
Rubella	140.04
Salmonellosis	5.28
Scarlet fever	10.05
Streptococcal angina	59.05
Tetanus	0.10
Trichinelliasis	4.33
Viral hepatitis	104.35
Whooping Cough	4.10

Form B (i)

Background information on morbidity of reportable
infectious diseases in 1996

ANIMAL DISEASES

Disease	Outbreaks
Anthrax	9/18
Leptospiroses	6/125
Porcine brucellosis	17/141
Rabies	41/41*

* 14/14 in wild animals.

Form B (ii)

Information on outbreaks of infectious diseases and similar occurrences that seem to deviate from the normal pattern

- | | |
|---|---|
| 1. Time of cognizance of the outbreak | July-October 1996 |
| 2. Location and approximate area affected | Southern part of Romania |
| 3. Type of disease | Acute meningitis 32%
Acute meningoencephalitis 46%
Acute encephalitis 21% |
| 4. Suspected source of disease/intoxication | Migratory birds (transmission by Cx.pipiens) |
| 5. Causative agent(s) | West Nile Virus |
| 6. Main characteristics of system | - |
| 7. Detailed symptoms, when applicable: | |
| * respiratory | - |
| * circulatory | Present in some cases of elderly people |
| * neurological/behavioral | Acute meningitis or meningoencephalitis -
Drowsiness, agitation, coma-c.s.f., clear few white blood cells (100-200/mm ³), polymorphonuclear dominant |
| * intestinal | - |
| * dermatological | Rash (rare) |
| * nephrological | - |
| * other | Often-nonspecific febrile illnesses with moderate lymphadenopathy |
| 8. Deviation(s) from the normal pattern as regards: | |
| * type | Typical |
| * development | Stabilized |
| * place of occurrence | Bucharest and surrounding districts |
| * time of occurrence | - |
| * symptoms | - |
| * virulence pattern | - |
| * drug resistance pattern | - |

- * agent(s) difficult to diagnose No viral strain was isolated
- * presence of unusual vectors Increased mosquito population-Culex pipiens spp.
- * other -
- 9. Approximate number of primary cases -
- 10. Approximate number of cases 527 clinically suspected; 168 laboratory confirmed by serological tests
- 11. Number of deaths 9 (fatality ratio 5.4 %), all people over age of 60
- 12. Development of the outbreak Ceased in October when the cold weather set in
- 13. Measures taken:

* 13.1 The urban area was surveyed for larval breeding sites. The larval positive sites were treated with appropriate larvicide. A systematic surveillance programme was established in Bucharest and in the other epidemic sites.

* 13.2 A system of sentinel chicken surveillance with biweekly serological examination was set up in the epidemic areas.

* 13.3 A community awareness programme was developed in view of informing about the measures aimed at preventing and controlling the illness.

Form C

Encouragement of publication of scientific results and
promotion of use of knowledge

1. The scientific results were published in Romanian and European publications. No restrictions are exerted in publishing research data.
2. Scientific publications can be obtained directly from the sources.
3. Romanian publications (printed in English) are available to the authors (Romania or foreign) without financial contributions.

Form D

Active promotion of contactsPart oneNational and international publications
in the microbiological field

1. "Romanian Archives of Microbiology and Immunology"
(Published quarterly by Inst. Cantacuzino
Spl. Independentei, 103 - Bucharest, in English).
2. "Revue Roumaine de Virologie"
(Published quarterly by Inst. of Virology
M.Bravu Street, 285 - Bucharest, in English and French).
3. "Bacteriology, Virology, Parasitology, Epidemiology"
(Published quarterly by the Romanian Society for
Microbiology, Progresului Street 10 - Bucharest,
in Romanian).

Second partConferences and other national scientific events with
international participation

1. The 75th Anniversary Scientific Session of the
Cantacuzino Institute and the 25th Anniversary Meeting of
the Pasteur Institutes Network;
Bucharest, September 17-19, 1996
2. Annual Meeting on Microbiology
Organized by the Romanian Society of Microbiology
Calimanesti, October, 28-31, 1996

Form D

Active promotion of contacts

Part one

National and international publications
in the microbiological field

1. "Review of Military Medicine"
(Published quarterly by the Medical Service of the Army,
Calea Plevnei, no. 134, sector 1, Bucharest, R-77103)

Second part

Conferences and other national scientific events with
international participation

1. International Symposium "Biotechnology Today and Tomorrow"
Bucharest, September 26-27, 1996
2. Second National Conference of Clinical Laboratories -
"CLINILAB"
Bucharest, October 8-10, 1996
3. National Congress of Clinical Toxicology
Bucharest, November 13-15, 1996

Form D

Active promotion of contacts

Part one

National and international publications
in the microbiological field

1. "Studies and Research in Veterinary Medicine"
(Published periodically by the Pasteur National
Institute for Veterinary Medicine, in English and
French, Calea Giulesti, no.333, sector 6 Bucharest,
77826).

Form E

Declaration of legislation, regulations and other measures

<u>Relating to</u>	<u>Legislation</u>	<u>Regulations</u>	<u>Other</u>	<u>Amended since last year</u>
(a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article 1	YES	YES	YES	NO
(b) Exports of micro-organisms* and toxins	YES	YES	NO	NO
(c) Imports of micro-organisms* and toxins	YES	YES	NO	NO

* Micro-organisms pathogenic to man, animals and plants, in accordance with the Convention

Form G

General description of vaccine and covered illnesses

1. Name of the research Center : Cantacuzino Institute
2. Location : Spl.Independentei,no.103
Bucharest, 70.100

No.	Disease	Vaccine
1.	Smallpox	-Freeze dried vaccinia (stock)
2.	Tuberculoses	-Freeze dried BCG
3.	Tetanus	-Tetanus toxoid
4.	Whooping Cough	-Pertussis (corpuscular inactivated)
5.	Diphtheria	-Diphtheria toxoid
6.	Dysentery	-Attenuated Sh. flexneri
7.	Influenza	-Trivalent influenza
8.	Measles	-Measles (attenuated)
9.	Typhoid fever	-Typhoid (inactivated)
10.	Brucellosis	-Brucella (inactivated)
11.	Rabies	-Rabies (B propiolactone,inactivated)
12.	Cholera	-Cholera (inactivated)

Form G

General description of vaccine and covered illnesses

1. Name of the research Center : Pasteur National Institute
for Veterinary Medicine
2. Location : Calea Giulesti, no.333,
sector 6, Bucharest 77826

No.	Disease	Vaccines*
1.	Anthrax	-Live attenuated vaccine
2.	Tetanus	-Tetanus toxoid
3.	Leptospirosis	-Inactivated vaccines with different serotype
4.	Salmonellosis	-Inactivated vaccines, with different strains
5.	Rabies	-Live attenuated vaccine (freeze-dried)
6.	Swine fever	-Live attenuated vaccine (freeze-dried)
7.	Newcastle disease	-Live attenuated vaccine (freeze-dried)

* All vaccines mentioned are for veterinary use only

RUSSIAN FEDERATION

(6 May 1997)

И Н Ф О Р М А Ц И Я

об объектах и биологической деятельности Российской Федерации, связанных с Конвенцией о запрещении разработки, производства и накопления запасов бактериологического (биологического) и токсинного оружия и об их уничтожении

I. Объявление по форме: "Объявлять нечего" или "Нет никаких новых изменений, подлежащих объявлению" для использования при обмене информацией

Мера	Объявлять нечего	Нет никаких новых изменений, подлежащих объявлению
A. часть I	☐	☐
A. часть 2 i)	☐	☐
A. часть 2 ii)	☐	☐
A. часть 2 iii)	☐	☐
B i)	☒	☐
B ii)	☒	☐
C	☐	☒
D	☐	☐
E	☐	☒
F	☐	☒
G	☐	☐

Дата 15 апреля 1997г.

Государство-участник Конвенции Российская Федерация

Мера укрепления доверия "А"

Форма А, часть I

Обмен данными об исследовательских центрах и лабораториях

1.1. Наименование объекта

Научно-исследовательский институт микробиологии Министерства обороны Российской Федерации (НИИ микробиологии МО РФ).

1.2. Ответственная государственная или частная организация или компания

Министерство обороны Российской Федерации

1.3. Местонахождение и почтовый адрес

НИИ микробиологии МО РФ - Российская Федерация, 610024, г. Киров, Октябрьский проспект, 119.

Центр военно-технических проблем биологической защиты НИИ микробиологии МО РФ - Российская Федерация, 620048, г. Екатеринбург, ул. Звездная, 1.

Вирусологический центр НИИ микробиологии МО РФ - Российская Федерация, 141300, Московская область, г. Сергиев Посад-6, ул. Октябрьская, 11.

1.4. Источник финансирования объявляемой деятельности

Министерство обороны Российской Федерации

1.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют

1.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

Наивысший уровень защиты в НИИ микробиологии и Вирусологическом центре - BL3. Центр военно-технических проблем биологической защиты не проводит работ с патогенными микроорганизмами.

1.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка и испытание технических средств защиты, а также средств и методов профилактики опасных инфекционных заболеваний, индикации патогенных агентов, дезинфекции военной техники и местности. Работы по биодegradации нефтепродуктов и других химических экотоксикантов, экологическому мониторингу НИИ микробиологии МО РФ и его центров.

В исследованиях использовались возбудители чумы, сапа, мелиоидоза, туляремии, бруцеллеза, легионеллеза, холеры, псевдотуберкулеза, дифтерии, сыпного тифа, вирусных энцефалитов, геморрагических лихорадок, Ку-лихорадки, ботулинический и столбнячный токсины.

2.1. Наименование объекта

Научно-исследовательский институт военной медицины Министерства обороны Российской Федерации (НИИ военной медицины МО РФ).

2.2. Ответственная государственная или частная организация или компания

Министерство обороны Российской Федерации

2.3. Местонахождение и почтовый адрес

Российская Федерация, 195043, Санкт-Петербург, ул. Лесопарковая, 4

2.4. Источник финансирования объявляемой деятельности

Министерство обороны Российской Федерации

2.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL 4 отсутствуют

2.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL 3

2.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка организационных основ и практических мер биологической (противоэпидемической) защиты войск, сил флота и населения страны. Исследования, разработки и испытания охватывают следующие группы средств защиты: индикация и идентификация возбудителей опасных инфекций и лабораторная диагностика вызываемых ими заболеваний; иммунопрофилактика актуальных для войск и сил флота инфекций; экстренная профилактика и лечение актуальных для войск и сил флота инфекционных заболеваний; дезинфекция, дезинсекция, репеллентная защита и дератизация в очагах инфекционных заболеваний и/или биологического заражения.

В исследованиях использовались возбудители туляремии, псевдотуберкулеза, брюшного тифа, дизентерии, газовой гангрены, сыпного тифа, Ку-лихорадки, хламидиозов, желтой лихорадки, японского энцефалита, везикулярного энцефаломиелита лошадей, клещевого энцефалита, а также

аттенуированные (вакцинные) штаммы этих возбудителей.

3.1. Наименование объекта

Государственный научный центр (ГНЦ) вирусологии и биотехнологии "Вектор".

3.2. Ответственная государственная или частная организация или компания

Министерство здравоохранения Российской Федерации (МЗ РФ). Российское акционерное общество (РАО) "Биопрепарат".

3.3. Местонахождение и почтовый адрес

Российская Федерация, 633150, Новосибирская область, Новосибирский район, пгт. Кольцово.

3.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации, Государственный комитет Российской Федерации по науке и технологиям, Министерство обороны Российской Федерации

3.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют

3.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 с элементами, соответствующими BL4

3.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение молекулярно-биологических, антигенных, вирулентных и патогенных характеристик вирусов - возбудителей заболеваний человека; разработка и изучение вакцин, включая генноинженерные, против вирусных инфекций; разработка приборов и методов изучения биоаэрозолей в интересах экологии, медицины и ветеринарии; разработка диагностических тест-систем для экспресс-анализа вирусных и бактериальных инфекций.

В исследованиях использовались возбудители венесуэльского и восточного энцефаломиелитов лошадей, клещевого и японского энцефалитов, геморрагических лихорадок (Марбург, Эбола, Боливийская, желтая, конго-крымская, с почечным синдромом, Ласса, Мачупо), вирусных гепатитов А и С, натуральной оспы, гриппа, цитомегаловирусной инфекции, паротита, токсоплазмоза, сифилиса, герпеса I, II и VI типов, краснухи, ротавирусы человека 2 типа, ВИЧ-1 и ВИЧ-2.

4.1. Наименование объекта

Саратовский научно-исследовательский противочумный институт "Мир-роб" Министерства здравоохранения Российской Федерации

4.2. Ответственная государственная или частная организация или компания

Министерство здравоохранения Российской Федерации

4.3. Местонахождение и почтовый адрес

Российская Федерация, 410071, г. Саратов, ул. Университетская, 46

4.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации

4.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют

4.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (три лаборатории площадью 72, 350 и 220 м²)

4.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение вопросов эпизоотологии, эпидемиологии и профилактики чумы, а также эпидемиологии и профилактики холеры. Изучение молекулярной генетики возбудителя чумы и эффективности методов иммунизации.

5.1. Наименование объекта

Ростовский государственный противочумный научно-исследовательский институт Министерства здравоохранения Российской Федерации

5.2. Ответственная государственная или частная организация или компания

Министерство здравоохранения Российской Федерации

5.3. Местонахождение и почтовый адрес

Российская Федерация, 344007, г. Ростов-на-Дону, ул. Горького.

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5.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации

5.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют

5.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (три лаборатории площадью 240, 144 и 136 м²)

5.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Изучение микробиологии, эпидемиологии чумы, холеры и холероподобных заболеваний, средств и методов их профилактики. Изучение эффективности методов иммунизации против чумы и холеры.

6.1. Наименование объекта

Волгоградский научно-исследовательский противочумный институт Министерства здравоохранения Российской Федерации

6.2. Ответственная государственная или частная организация или компания

Министерство здравоохранения Российской Федерации

6.3. Местонахождение и почтовый адрес

Российская Федерация, 400087, г. Волгоград, ул. Голубинская, 7

6.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации

6.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют

6.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (семь лабораторий площадью 160, 150, 323, 562, 65, 140 и 350 м²)

6.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Совершенствование методов обнаружения возбудителей сапа, мелииоза. Разработка средств профилактики и лечения, методов дезинфекции. Изучение микробиологии возбудителей сапа и мелииоза; изучение эффективности методов иммунизации; исследование глубоких микозов.

7.1. Наименование объекта

Иркутский противочумный институт Сибири и Дальнего Востока Министерства здравоохранения Российской Федерации

7.2. Ответственная государственная или частная организация или компания

Министерство здравоохранения Российской Федерации

7.3. Местонахождение и почтовый адрес

Российская Федерация, 664047, г.Иркутск, ул. Трилиссера, 78

7.4. Источники финансирования объявляемой деятельности

Министерство здравоохранения Российской Федерации

7.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют

7.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты.

BL3 (одна лаборатория площадью 90 м²)

7.7. Объем и общее описание деятельности: включая, соответственно, виды микроорганизмов и токсинов

Изучение вопросов микробиологии и эпидемиологии региональных природно-очаговых заболеваний (чума, сибирская язва, туляремия, бруцеллез). Разработка методов диагностики заболеваний, вызываемых вирусами Марбург, Эбола, Ласса, Мачупо, Инко, Батан, Гета, Токарибо, лимфоцитарного хориоменингита, бешенства.

8.1. Наименование объекта

Научно-исследовательский институт эпидемиологии и микробиологии имени Н.Ф.Гамалеи Российской Академии медицинских наук (НИИ эпидемиологии и микробиологии им. Н.Гамалеи РАМН).

8.2. Ответственная государственная или частная организация или компания

Российская Академия медицинских наук

8.3. Местонахождение и почтовый адрес

Российская Федерация, 123098, Москва, ул. Гамалеи, 18

8.4. Источник финансирования объявляемой деятельности

Российская Академия медицинских наук, Российский Фонд фундаментальных исследований, Министерство обороны Российской Федерации.

8.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL 4 отсутствуют

8.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL 3

8.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка диагностических и вакцинных препаратов, анатоксинов, обоснование схем их применения, разработка новых и совершенствование существующих лабораторных методов диагностики инфекционных заболеваний, методов идентификации микроорганизмов и токсинов. Изучение эпидемиологии, микробиологии и молекулярной биологии микроорганизмов.

В исследованиях использовались возбудители туляремии, бруцеллеза, риккетсиозов, листериоза, легионеллеза, ботулинические токсины.

9.1. Наименование объекта

Всероссийский научно-исследовательский институт защиты животных Министерства сельского хозяйства и продовольствия Российской Федерации.

9.2. Ответственная государственная или частная организация или компания

Министерство сельского хозяйства и продовольствия Российской Федерации.

9.3. Местонахождение и почтовый адрес

Российская Федерация, 600900, г. Владимир, п/о Юрьевец

9.4. Источники финансирования объявляемой деятельности

Министерство сельского хозяйства и продовольствия Российской Федерации

9.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL 4 отсутствуют

9.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL 3 (одна лаборатория площадью 150 м²)

9.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка вакцин, в том числе генно-инженерных, против ящура, чу-

мы КРС и свиней, болезней Ауески и Гамборо, антирабической; разработка средств и методов диагностики инфекционных болезней сельскохозяйственных животных. Производство диагностикумов, вакцин и лечебных препаратов ветеринарного назначения.

10.1. Наименование объекта

Институт вирусологии им. Д.И. Ивановского Российской Академии медицинских наук

10.2. Ответственная государственная или частная организация или компания

Российская Академия медицинских наук.

10.3. Местонахождение и почтовый адрес

Российская Федерация, 123098, Москва, ул. Гамалеи, 16.

10.4. Источник финансирования объявляемой деятельности

Российская Академия медицинских наук, Министерство обороны Российской Федерации.

10.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Подразделения с уровнем защиты BL4 отсутствуют.

10.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

BL3 (один блок площадью до 50 м²)

10.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Разработка средств и методов индикации и идентификации возбудителей вирусных инфекций, циркулирующих на территории Российской Федерации; разработка средств и методов диагностики, профилактики и лечения гриппа, гепатитов В, С, Д и G, герпеса, арбовирусных инфекций; первичный скрининг и оценка противовирусного действия химиопрепаратов и индукторов интерферона.

Изучение биологических свойств штаммов ВИЧ, изолированных на территории России, молекулярной эпидемиологии и патогенеза СПИДа.

11.1. Наименование объекта.

Фармацевтическое акционерное общество (ФАО) "Ферейн".

11.2. Ответственная государственная или частная организация или компания

ФАО "Ферейн".

11.3. Местонахождение и почтовый адрес

Российская Федерация, 142530, Московская область, г. Электросталь, пр. Мечникова, 1.

11.4. Источники финансирования объявляемой деятельности

ФАО "Ферейн".

11.5. Число максимально изолированных подразделений в рамках исследовательского центра или лаборатории

Один блок площадью 284 м²

11.6. В отсутствие максимально изолированного подразделения указать наивысший уровень защиты

Не объявляется.

11.7. Объем и общее описание деятельности, включая, соответственно, виды микроорганизмов и токсинов

Наработка очищенного инаktivированного антигена вируса иммунодефицита человека (ВИЧ), производство на его основе тест-систем, выявляющих антитела к ВИЧ первого типа.

Форма А: часть 2 1)

**Объявление национальной программы исследований и разработок
в области биологической защиты**

1) Имеется ли национальная программа для проведения исследований и разработок в области биологической защиты на территории государства-участника, под его юрисдикцией или контролем где бы то ни было ?

Имеется программа исследований и разработок медицинских и технических средств защиты от биологического оружия.

Форма А: часть 2 11)

**Национальная программа исследований и разработок в области
биологической защиты**

**II. Описание программы исследований и разработок медицинских и
технических средств защиты от биологического оружия**

1. Целью программы является разработка средств и методов защиты войск и населения от биологического оружия и разработка организационных основ противозидемической и противобактериологической защиты.

В рамках программы выполнены следующие основные исследования и разработки:

исследовались патогенность и вирулентность возбудителей опасных инфекционных заболеваний - вероятных агентов БО;

разрабатывались средства и методы специфической профилактики; изыскивались антибактериальные и противовирусные препараты для профилактики и лечения заболеваний, вызываемых вероятными агентами БО; разрабатывались схемы лечения этих заболеваний;

разрабатывались средства и методы диагностики опасных инфекционных заболеваний;

разрабатывались методы и режимы дезинфекции, дезинсекции, репеллентной защиты и дератизации в очагах инфекционных заболеваний и/или биологического заражения;

определялись защитные свойства военной техники, средств индивидуальной и коллективной защиты;

разрабатывались, оценивались и совершенствовались методы и технические средства обнаружения биологических агентов;

разрабатывались методы проведения аэробиологических испытаний медицинских и технических средств защиты от биологического оружия. Общая сумма финансирования в 1996 году - около 52 260 млн. руб.^{х)}

Источник - бюджетные ассигнования.

3. Да.

4. Около 10% денежных средств, выделенных для финансирования программы, расходовались на необоронных объектах, работающих по контрактам.

5. Подрядчиками выполняются следующие основные исследования:

разработка и усовершенствование средств и методов индикации и идентификации микроорганизмов и токсинов;

разработка диагностических тест-систем для экспресс-анализа вирусных и бактериальных инфекций;

разработка и изучение экспериментальных образцов вакцин для профилактики инфекционных заболеваний вирусной и бактериальной природы;

разработка новых антимикробных препаратов для экстренной профилактики и лечения инфекционных заболеваний;

изыскание новых дезинфицирующих средств и разработка методов их применения;

разработка приборов и методов изучения биологических аэрозолей.

х) С учетом инфляции

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    MO[Министерство обороны РФ] --- NIMB[НИИ микробиологии МО РФ]
    MO --- NVM[НИИ военной медицины МО РФ]
    MO --- IIV[Институт вирусологии им. Д. Ивановского РАМН]
    MO --- NIA[НИИ эпидемиологии и микробиологии им. Н. Гамалеи РАМН]
    MO --- RAO[РАО "Биопрепарат"]
    MO --- GIB[ГНЦ биологического приборостроения]
    MO --- GVT[ГНЦ вирусологии и биотехнологии "Вектор"]
    MO --- GPM[ГНЦ прикладной микробиологии]
    MO --- GIC[ГНЦ по антибиотикам-НИИ антибиотиков Минздрава здравоохранения РФ]
    MO --- CML[Центр по химии лекарственных средств - ВНИИ химико-фармацевтического института Минздрава здравоохранения РФ]
    MO --- GIK[Гос. институт стандартизации и контроля для медицинских и иммунологических препаратов им. Л. Тарапачева Минздрава здравоохранения РФ]
  
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Форма А: часть 2 iii)

Национальная программа исследований и разработок в области биологической защиты**III. Объекты**

1.1. Научно-исследовательский институт микробиологии Министерства обороны Российской Федерации (НИИ микробиологии МО РФ).

1.2. НИИ микробиологии - Российская Федерация, 610024, г. Киров, Октябрьский проспект, 119.

58°36'10" северной широты

49°39'24" восточной долготы

Центр военно-технических проблем биологической защиты НИИ микробиологии - Российская Федерация, 620048, г. Екатеринбург, ул. Звездная, 1.

56°47'04" северной широты

60°34'49" восточной долготы

Вирусологический центр НИИ микробиологии - Российская Федерация, 141300, Московская область, г. Сергиев Посад-6, ул. Октябрьская, 11.

56°15'13" северной широты

38°07'09" восточной долготы

1.3. Площадь лабораторных помещений с разбивкой по уровню изоляции:

BL2 - 1322 м²

BL3 - 7212 м²

BL4 - нет

Общая площадь лабораторных помещений - 8534 м²

1.4. Организационная структура учреждения

I) Общая численность сотрудников - 3358 человек.

II) Классификация сотрудников:

военный персонал

- 672 человека;

гражданский персонал

- 2686 человек.

III) Классификация сотрудников по категориям:

научные работники

- 539

инженерный состав

- 161

лабораторно-технические работники

- 643

административный и вспомогательный персонал - 2015

IV) Научная специализация научных/инженерных работников
микробиология, эпидемиология, биохимия, вирусология, иммунология, иммунохимия, биофизика, генетика, аэробиология, прикладная математика, биотехнология, экология.

V) Подрядные сотрудники на объекте не работают

VI) Источник финансирования деятельности:

Министерство обороны Российской Федерации

VII) Уровни финансирования по разделам программы:

исследования	- 36,9%
разработки	- 47,4%
испытания и оценка	- 15,7%

VIII) Порядок публикации материалов определяется инструкциями, действующими в Министерстве обороны Российской Федерации. Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1996 году по результатам проделанной работы:

Васильев Н.Т., Пименов Е.В., Калининский В.Б., Бакулин М.Н. Вклад военных медиков в разработку технологий промышленного производства первых отечественных антибиотиков. Антибиотики и химиотерапия. - 1996. - Т. 41. N 4. - С. 3-6.

Анисимова Т.И., Саяпина Л.А., Пименов Е.В., Кожухов В.В., Климов В.И. Терапевтические и защитные вакцины против ООИ. International Symposium on Novel Methods and Standardisation in Microbiology (Kosice Slovak Republic, Juli 1-4, 1996): Fems federation Evropan Microbiological Seciefie. - 1996. - P. 23.

Супотницкий М.В. После СПИДа. Российский химический журнал. - (Журнал Российского химического общества им. Д.И. Менделеева). - 1996. - Т. 40. N 2. - С. 141-152.

Пименов Е.В., Дармов И.В., Погорельский И.П., Янов С.Н. Выделение и характеристика штаммов бактерий, резистентных к соединениям мышьяка. Микробиология. - 1996. - Т. 65, N 2. - С. 214-218.

Лукин Е.П., Михайлов В.В., Олейчик В.Л., Солодянкин А.И. Математическое моделирование возможной заболеваемости эпидемическим сыпным тифом в современных условиях. Журн. микробиол., эпидемиол. и иммунологии. - 1996. - N 1. - С. 31-33.

Михайлов В.В., Воробьев А.А., Махлай А.А., Халтаева Г.Г., Суворова Т.А., Краснянский В.П., Яковлев Э.А., Пашанин Ю.Г., Дыканов Г.А., Подкуйко В.Н., Лебединская Е.В. Экспериментальное изучение иммуноген-

ных и протективных свойств штамма M-44 *Coxiella burnetii* и живой энтеральной вакцины против лихорадки Ку. Там же. - С. 38-42.

Лукин Е.П. Экология риккетсий Провачека. Там же. - С. 88-91.

Дробков В.И., Маракулин И.В., Погорельский И.П., Дармов И.В., Смирнов Е.В. Спектр антител при введении животным бактерий чумы и псевдотуберкулеза. Там же. - N 2. - С. 31-35.

Воробьев А.А., Подкуйко В.Н., Михайлов В.В., Махлай А.А. Непарентеральные методы иммунизации против оспы. Там же. - N 5. - С. 117-121.

Лукин Е.П., Воробьев А.А., Балаева Н.М. Астраханская лихорадка - риккетсиоз группы клещевых пятнистых лихорадок, вызываемых риккетсиями нового патовара *Rickettsia conorii*. Там же. - С. 96-99.

Хамитов Р.А., Мясников Ю.Г., Ионов С.Н., Бадикова Л.П., Жиркова Г.Е. Изучение влияния системы культивирования на фенотипическую устойчивость вируса венесуэльского энцефаломиелита лошадей. Вопросы вирусологии. - 1996. - N 5. - С. 214-216.

Донченко В.В., Лебедев В.Н., Маркин В.А., Фирсова И.В. Эффективность вирусспецифических белков в иммуногенезе при экспериментальной лихорадке Марбург. Там же. - С. 216-218.

Борисевич И.В., Михайлов В.В., Потрываева Н.В., Малинкин Ю.Н., Кириллов Н.П., Краснянский В.П., Марков В.И., Махлай А.А., Лебединская Е.В. Разработка иммуноферментной тест-системы для определения антигена вируса Эбола. Там же. - С. 232-234.

Маркин В.А., Махлай А.А., Воробьева М.С., Бектемиров Т.А. Коллекционирование патогенных вирусов: состояние и перспективы проблемы. Там же. - N 6. - С. 281-284.

1.5. Работы, выполняемые в учреждении в области биологической защиты: создание и усовершенствование специфических средств защиты от инфекционных заболеваний и технологий их производства; разработка средств и методов экстренной профилактики опасных инфекционных заболеваний; определение защитных свойств военной техники, средств индивидуальной и коллективной защиты; усовершенствование методов и средств обеззараживания; разработка на основе изучения патогенеза аэрогенных инфекций методов ранней лабораторной диагностики опасных инфекционных заболеваний; усовершенствование методов и приборов для индикации биоагентов; разработка средств и методов биологической очистки районов дислокации войск от экологически вредных веществ.

При проведении исследований используются возбудители чумы, сапа, мелиоидоза, туляремии, бруцеллеза, легионеллеза, холеры, псевдотубер-

кулеза, дифтерии, сыпного тифа, вирусных энцефалитов, геморрагических лихорадок, Ку-лихорадки, ботулинический и столбнячный токсины.

Наружные исследования биологических аэрозолей не проводятся.

2.1. Научно-исследовательский институт военной медицины Министерства обороны Российской Федерации (НИИ военной медицины МО РФ)

2.2. Российская Федерация, 195043, Санкт-Петербург, ул. Лесопарковая, 4

Географические координаты местоположения:

59°58'40" северной широты

30°29'10" восточной долготы

2.3. Площадь лабораторных помещений с разбивкой по уровню изоляции: BL 2 - 840 м²

BL 3 - 210 м²

BL 4 - нет

Общая площадь лабораторных помещений - 1050 м²

2.4. Организационная структура учреждения

1) Общая численность сотрудников - 78 человек

II) Классификация сотрудников:

военный персонал - 11 человек

гражданский персонал - 67 человек

III) Классификация сотрудников по категориям:

научные работники - 34

инженеры - 2

лабораторно-технические работники - 16

административный и вспомогательный персонал - 26

IV) Научная специализация научных/инженерных работников:

эпидемиология, микробиология, вирусология, иммунология, вакцинология, медицинская энтомология и паразитология, дезинфектология, биотехнология, иммунохимия

V) Подрядные сотрудники на объекте не работают

VI) Источник финансирования деятельности:

Министерство обороны Российской Федерации

VII) Уровни финансирования по разделам программы:

исследования - 65 %

разработка - 20 %

испытания и оценка - 15 %

VIII) Порядок публикации материалов определяется инструкциями, действующими в Министерстве обороны Российской Федерации. Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1996 году по результатам проделанной работы:

Василенко А.Ж., Мисникова М.А., Пчелинцев С.Ю., Савельев А.П., Степанов А.В. Совместимость вакцин при комплексной и ассоциированной иммунизации. Уфа: Гилем, 1996. - 405 с.

Галочко К.Г., Магазов Р.Ш., Михайлов В.Н., Мисников О.П., Савельев А.П. Система массовой комплексной и ассоциированной вакцинации для крупных эпидгеографических регионов мира. Уфа: Гилем, 1996. - 183 с.

Авраменко В.С., Гриценко В.Ч. Характеристика возбудителей гнойно-септических инфекций в хирургических стационарах различного профиля. В сб. "Инфектология. Достижения и перспективы". Тез. докл. юбилейной конф., посвященной 100-летию первой в России кафедры инфекционных болезней (С.-Петербург, 22-23 октября 1996 г.). - СПб.-1996. - С. 20.

Авраменко В.С., Гриценко В.Ч., Иванов А.А. О резистентности госпитальных штаммов возбудителей гнойно-септических инфекций к дезинфицирующим веществам. Там же. - С. 21.

Воскресенский А.М., Кацалуха В.В. Молекулярно-генетические методы определения антибиотикочувствительных бактерий. Там же. - С. 58.

Гольдин Р.Б. Преморбидная и ранняя диагностика сыпного тифа в очагах педикулеза. Там же. - С. 63.

Добрынин В.М., Позняк А.Л., Добрынина И.А., Захаренко С.М. Совершенствование микробиологических методов диагностики сыпного тифа в очагах педикулеза. Там же. - С. 73.

Дунаева И.Д. Оценка эффективности нового средства борьбы с головным педикулезом у военнослужащих. Там же. - С. 77.

Захаренко С.М., Добрынин В.М., Семенова И.А., Кротков А.Г., Позняк А.Л., Добрынина И.А. Дисбиотические изменения в кишечнике у больных острой дизентерией. Там же. - С. 91.

Захаров Б.Н., Иванов А.А., Миронова Т.Б. Возможности использования установок для получения электрохимически активированных растворов для дезинфекции в инфекционных стационарах. Там же. - С. 92.

Карташов В.И., Абросимова В.Л. Роль средств обеззараживания воды в проблеме снижения заболеваемости острыми кишечными инфекциями. Там же. - С. 119.

Лобзин Ю.В., Раевский К.К., Позняк А.Л., Гольдин Р.Б., Нуралова

И.В. Антропонозные хламидиозы дыхательных путей. Там же. - С. 141.

Михайленко А.А., Кочерженко В.А., Нуралова И.В. Клинико-лабораторная диагностика хламидийных менингитов. Там же. - С. 156.

Нуралова И.В., Раевский К.К., Лебедева И.К., Икаева М.Н. Индивидуализированный тест определения *in vitro* чувствительности хламидий к средствам антибиотикотерапии. Там же. - С. 162.

Позняк А.Л., Кочеровец В.И., Нуралова И.В., Хлопунова О.В. Хламидийно-бактериальные ассоциации в этиопатогенезе повторных стрептококковых ангин и ОРЗ. Там же. - С. 176.

Позняк А.Л., Степанов А.В., Мисников О.П., Тихонов И.В., Литусов Н.В. Влияние "Биоспорина" на морфофункциональное состояние лейкоцитов у здоровых военнослужащих в процессе их адаптации к климато-географическим условиям Крыма. Там же. - С. 177.

Раевский К.К., Навашин С.М., Фомина И.П., Кацалуха В.В., Дьяков С.И. Перспективы применения отечественного пefлоксацина для профилактики и лечения тяжелых инфекций. Там же. - С. 178.

Раевский К.К., Николаев В.П., Жулябч Е.И. Расширение возможностей лабораторной диагностики инфекций у военнослужащих. Там же. - С. 179.

Свиридов Л.П., Кацалуха В.В. Этиотропная терапия пневмоний на фоне иммунодефицита. Там же. - С. 187.

Степанов А.В., Титова Т.С., Харитоновна В.А., Савельев А.П., Лапина Е.А., Ошейко Н.А. Перспективные подходы к оценке иммуногенности живых вакцин. Там же. - С. 201.

Яргомский В.А., Раевский К.К., Икаева М.Н. Перспективы совершенствования лабораторной диагностики вирусно-риккетсиозных инфекций в армии и на флоте на основе метода культур клеток. Там же. - С. 231.

Гладин Д.П., Козлова Н.С., Воскресенский А.М. К вопросу о причинах неудач антибиотикотерапии. Профилактические основы теории и практики семейной медицины. Тез. докл. научно-практической конференции. Под ред. проф. В.Г.Маймулова. - СПб. - 1996. - С. 143.

Дьяков С.И., Лебедева И.К., Сидоренко С.И. Современные методы и средства быстрого определения чувствительности возбудителей опасных инфекционных заболеваний к антибиотикам и химиопрепаратам. Военно-медицинский журнал. - 1996. - Т. 317, N 3. - С. 44-48.

Красильников И.И., Алферова О.Ф., Степанов А.В., Цикаришвили Г.В. Бензамид как структурная основа новых лекарственных препаратов с широким спектром биологической активности. Химико-фармацевтический журнал.

- 1996. - Т. 23, N 8. - С. 19-22.

Красильников И.И., Степанов А.В., Мисникова М.А. Новый подход в профилактике и лечению поражений бактериальными токсинами: перспективы применения ингибиторов АДР-рибозилирования. Журн. микробиол., эпидемиол. и иммунобиологии. - 1996. - N 1. - С. 11-13.

Раевский К.К., Добрынин В.М., Кочеровец В.И., Кацалуха В.В., Добрынина И.А. Совершенствование микробиологической диагностики дисбактериозов. Сб. тез. докл. Всероссийской научно-практической конф. "Дисбактериозы и эубиотики". - М., 1996. - С. 31.

Шихвердиев Н.Н., Рогачев М.В., Добрынин В.М., Гудымович В.Г. Инфекционные осложнения при хирургической коррекции пороков сердца и кальцинозом. Материалы научно-практической конф. "Актуальные проблемы гнойно-септических инфекций". - Санкт-Петербург, 1996. - С. 110-111.

Цвелев Ю.В., Кира Э.Ф., Плеханов А.Н., Нуралова И.В. Клинико-бактериологическая диагностика и комплексное лечение хронических кальцинозов. Вестник Российской ассоциации акушеров-гинекологов. - 1996. - N 3. - С. 58-61.

Горцевская И.А., Икаева М.Н., Николаев В.П., Раевский К.К., Ткачук С.М., Яргомский В.А. Методические рекомендации по применению культур клеток в санитарно-эпидемиологических и лечебно-диагностических учреждениях армии и флота. М.: ГВМУ МО РФ. - 1996. - 20 с.

Гольдин Р.Б., Нуралова И.В., Плеханов А.Н., Раевский К.К., Царькова В.А., Шиплев С.А. Методические рекомендации по лабораторной диагностике хламидийных инфекций в клинико-диагностических и санитарно-эпидемиологических лабораториях медицинской службы ВС РФ. М.: ГВМУ МО РФ. - 1996. - 16 с.

Добрынин В.М., Добрынина И.А., Захарченко С.М., Кацалуха В.В., Лобзин Ю.В., Позняк А.Л., Раевский К.К., Сиволодский Е.П. Методические рекомендации по микробиологической диагностике дисбактериозов кишечника в лечебно-диагностических учреждениях армии и флота. М.: ГВМУ МО РФ. - 1996. - 17 с.

Бадиков В.Д., Добрынин В.М., Добрынина И.А., Кацалуха В.В., Сиволодский Е.П., Хлопунова О.В. Методические рекомендации по микробиологической диагностике раневых инфекций в лечебно-диагностических учреждениях армии и флота. М.: ГВМУ МО РФ. - 1996. - 56с.

Горцевская И.А., Муравьева М.Г., Николаев В.П., Раевский К.К., Царькова В.А. Методические рекомендации по вирусологической диагности-

ке заболеваний, вызываемых вирусом герпеса простого. М.: ГЭМУ МО РФ. - 1996. - 23 с.

Voskresensky A.M., Kozlova N.S., Katsalukha V.V., Vasilyeva I.N. Determination of tetracycline-resistance determinants in *Salmonella typhimurium* using molecular genetic methods. Medical microbiology letters. - 1996. - Vol. 5. - Suppl. 1. - P. 57.

Voskresensky A.M., Kozlova N.S., Katsalukha V.V., Vasilyeva I.N., Gladin D.P. Determination of *tet b* and *tet c* genes in enterobacteria using PCR metod. Ibid. P. 57.

Gladin D.P., Ivanov V.P., Zaytseva T.K., Kozlova N.S., Voskresensky A.M. Conjugative r-plasmids of *Shigella* spp., isolated in St.-Petersburg and region in 1994-1995. Ibid. P. 59.

Kozlova N.S., Ivanov V.P., Gladin D.P., Voskresensky A.M. Epidemiological observations on the antibiotic resistance trends of enterobacteria, isolated in the region of St.-Petersburg. Ibid. P. 108.

Kozlova N.S., Ivanov V.P., Gladin D.P., Voskresensky A.M. Ecological aspects of circulation antibioticoresistant enterobacteria in St.-Petersburg and region. Ibid. P. 109.

Krutitskaya L., Tokarevich N., Vasilenko A. Autoimmune component in individuals during immune response to inactivated combined vaccine against Q-fever. Acta virologica. - 1996. - Vol. 40. - P. 173-177.

2.5. Работы, выполняемые в учреждении в области биологической защиты: обоснование организационных основ противоэпидемической (биологической) защиты войск и сил флота; создание новых и усовершенствование ранее разработанных средств и методов индикации и идентификации возбудителей опасных инфекций и лабораторной диагностики вызываемых ими заболеваний, средств и методов иммунопрофилактики, экстренной профилактики и лечения актуальных для войск и сил флота инфекционных заболеваний, способов дезинфекции, дезинсекции, репелентной защиты и дератизации в очагах инфекционных заболеваний и/или биологического заражения.

В исследованиях использовались возбудители туляремии, псевдотуберкулеза, брюшного тифа, дизентерии, газовой гангрены, сыпного тифа, Ку-лихорадки, хламидиозов, желтой лихорадки, японского энцефалита, венесуэльского энцефаломиеелита лошадей, клещевого энцефалита, а также аттенуированные (вакцинные) штаммы этих возбудителей.

Наружные исследования биологических аэрозолей не проводятся.

3.1. Государственный научный центр (ГНЦ) прикладной микробиологии.

3.2. Российская Федерация, 142279, Московская область, Серпуховской район, поселок Оболенск.

Географические координаты местоположения:

54°58'48" северной широты

37°13'48" восточной долготы

3.3. Площадь лабораторных помещений с разбивкой по уровню изоляции:

BL2 - 4200 м²

BL3 - нет

BL4 - нет

Общая площадь лабораторных помещений - 4200 м²

3.4. Организационная структура учреждения

I) Общая численность сотрудников, участвующих в национальной программе исследований и разработок в области противобактериологической защиты - 60 человек

II) Классификация сотрудников:

военный персонал

- 3 человека

гражданский персонал

- 57 человек

III) Классификация сотрудников по категориям:

научные работники

- 12

инженеры

- 5

техники и рабочие

- 40

административный и вспомогательный персонал

- 3

IV) Научная специализация научных/инженерных работников
микробиология, биохимия, патоморфология, генетика, молекулярная биология, иммунохимия, иммунология

V) Подрядные сотрудники на объекте не работают

VI) Источники финансирования деятельности:

финансирование работ по программе противобактериологической защиты осуществляется Министерством обороны Российской Федерации (через РАО "Биопрепарат").

VII) Уровни финансирования по разделам программы:

исследования

- 71%

разработки

- 29%

испытания и оценка

- -

VIII) Политика объекта в отношении публикаций:

Публикуются патентозащищенные результаты фундаментальных и прикладных исследований. Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1996 году по результатам проделанной работы:

Манзенюк И.Н., Светоч Э.А., Дядищев Н.Р., Степаншин Ю.Г., Бузюн А.В. Некоторые показатели инфекционного процесса при терапии сала у обезьян. Антибиотики и химиотерапия. - 1996. - Т. 41, N 1. - С. 13-18.

Филонов А.Е., Манзенюк И.Н., Светоч Э.А. Конъюгационный перенос и экспрессия R-плазмид бактерий рода *Pseudomonas* в клетках *Pseudomonas mallei* Ц-5. Там же. - N 3. - С. 20-24.

Померанцев А.П., Манзенюк И.Н., Светоч Э.А., Степаншин Ю.Г., Кондрик Е.К., Гусев В.В., Светоч Э.А. *Erysipelothrix rhusiopathiae*: плазмиды, устойчивость к антибактериальным препаратам. Там же. - N 4. - С. 30-35.

Манзенюк И.Н., Марченко А.И., Светоч Э.А. Изучение чувствительности штаммов *Pseudomonas mallei* к антибактериальным препаратам в опытах *in vitro* на модели клеточных культур. Там же. - N 11. - С. 14-17.

Клыков С.П., Падерин Ю.П., Садиков М.М., Чупрунов В.П., Дербышев В.В., Гусев В.В. Влияние скорости роста культур на выживаемость сальмонелл. Биотехнология. - 1996. - N 1. - С. 35-39.

Денисов А.А., Борзенков В.М., Любимов И.И., Хомяков Ю.Н., Гусев В.В. Результаты доклинического изучения отечественного рекомбинантного лимфотоксина человека. Там же. - N 3. - С. 19-26.

Герасимов В.Н., Ермоленко З.М., Штучная Г.В., Мартовецкая И.И., Холоденко В.П., Степанов А.В. Физиологические, ультраструктурные и морфо-популяционные особенности бактерий *Mycobacterium flavescens*, утилизирующих нефть и нефтепродукты. Там же. - N 5. - С. 17-24.

Панин А.П., Серых Н.И., Малик Е.В., Гараев И.М., Боровиков Н.В., Денисов А.А. Повышение эффективности пробиотикотерапии у поросят. Ветеринария. - 1996. - N 3. - С. 17-22.

Померанцев А.П., Старицин Н.А. Поведение гетерологичной рекомбинантной плазмиды pCET в клетках *Bacillus anthracis*. Генетика. - 1996. - Т. 32, N 4. - С. 500-509.

Жиленков Е.Л., Степанов А.В., Дианов Е.Е., Гаевская Г.Б. Характеристика бактериофагов В-типа, адсорбирующихся на пиях *Pseudomonas aeruginosa*. Микробиология. - 1996. - Т. 65, N 4. - С. 540-545.

Иванов А.Ю., Вагабов В.М., Фомченков В.М., Кулаев И.С. Исследование влияния полифосфатов клеточной оболочки на чувствительность дрожжей *Saccharomyces carlsbergensis* к повреждающему действию цетилтриметиламмоний бромида. Там же. - N 5. - С. 607-612.

Гоголевский П.А., Гоголевская И.К., Кузнецова И.В., Кузнецов А.В. Экспрессия рекомбинантных ДНК RSVlacZ и pCMVlacZ в предимплантационных эмбрионах кролика. Молекулярная генетика. - 1996. - Т. 32. N 8. - С. 1045-1050.

Носков А.Н., Кравченко Т.Б., Носкова В.П. Выявление функционально активных доменов в молекуле протективного антигена сибиреязвенного экзотоксина. Молекулярная генетика, микробиология и вирусология. - 1996. - N 3. - С. 16-20.

Носков А.Н., Кравченко Т.Б., Носкова В.П. Выявление функционально активных доменов в молекуле летального фактора сибиреязвенного экзотоксина. Там же. - С. 20-22.

Кузнецов А.В., Сигаева В.А., Кузнецова И.В., Шит И.Ю. Сперматозоиды кролика способны связывать чужеродную ДНК. Проблемы репродукции. - 1996. - N 1. - С. 7-10.

Сигаева В.А., Кузнецова И.В., Кузнецов А.В. Связывание экзогенной ДНК сперматозоидами. Там же. - N 2. - С. 18-20.

Гремякова Т.А., Анисимов А.П. Серологическая активность антигена "Фракция 1" *Yersinia pestis* определяется его белковым компонентом. Конф. "Гомеостаз и инфекционный процесс" (Саратов, 7 июня 1996 г.). Тез. докл. - С. 1.

Pavlov V.M., Mokrievich A.N., Volkovoy K.I. Cryptic plasmid pFNL 10 from *Francisella novicida* - like F6 168: The base of plasmid vectors for *Francisella tularensis*. FEMS Immunology and Medical Microbiology. - 1996. - V. 13. - P. 253-256.

Stepanov A.V., Marinin L.I., Pomerantsev A.P., Staritsyn N.A. Development of novel vaccines against anthrax in man. J. of Biotechnology. - 1996. - V. 44. - P. 166-163.

Staritsyn N.A., Shishkova N.A., Marinin L.I., Stepanov A.V. *Bacillus anthracis* strain identification by means of phenotypic systematic criteria. Salisbury medical bulletin. - 1996. - Special suppl. - N 87. - P. 63-64.

Staritsyn N.A., Noskov A.N., Stepanov A.V., Pomerantsev A.P. Structure and function of *Bacillus anthracis* capsule operon and the role of its expression products in anthrax pathogenesis. Ibid. - P.

90-91.

Pavlov V.M., Tedicov V.M., Mokrievich A.N. Cloning of *ori pX01* and *pag* gene of *B. anthracis* in *Francisella tularensis*. Ibid. - P. 98.

Noskov A.N., Kravchenko T.B. Elucidation of roles of functional domains role in the molecules of anthrax toxin factors. Ibid. - P. 99.

Pomerantsev A.P., Mockov Yu.V., Marinin L.I., Stepanov A.V., Podunova L.G. Anthrax prophylaxis by antibiotic resistant strain STI-AR in combination with urgent antibiotic therapy. Ibid. - P. 131-132.

Stepanov A.V., Noskov A.N., Urakov N.N., Arsenjev S.J. Current status of immunoprophylaxis of quarantine infection in Russia. Outlook for the development of new generation vaccines against quarantine diseases. 3. Medizinische B-Schutz-Tagung "des BMVg". Bundeswehr. 23-24 oktober, 1996.

Eruslanov B.V., Borzenkov V.N., Pecherskikh E.I., Svetochn E.A., Urakov N.N. Development of latex test-system for express identification of legionellosis and bacterial meningitis agent in external medium and in clinical materials. Augustusburg conference of advanced science "Problems of Quantitation of Nucleic Acids" (Augustusburg, Germany. 23-26 Sept., 1996).

Biketov S.F., Fegeding K.V., Nepoklonov E.J., Ignatov S.G., Stepanov A.V. Detection of vegetative and spore forms of *Bacillus anthracis* in clinical and environmental specimens by PCR-ELISA. Ibid.

3.5. Работы, выполняемые в учреждении в области биологической защиты: изучение с использованием методов генной инженерии факторов патогенности и иммуногенности возбудителей опасных инфекционных заболеваний (сапа, мелиоидоза, легионеллеза, сибирской язвы, чумы) с целью разработки вакцинных и диагностических препаратов.

Наружные исследования биологических аэрозолей не проводятся.

4.1. Государственный научный центр (ГНЦ) вирусологии и биотехнологии "Вектор".

4.2. Российская Федерация, 633159, Новосибирская область, Новосибирский район, пгт Кольцово.

Географические координаты местоположения:

54° 56' 13" северной широты

83° 13' 52" восточной долготы

4.3. Площадь лабораторных помещений с разбивкой по уровню изоляции: BL2 - 400 м²

BL3 - 5690 м²

Часть лабораторных помещений уровня BL3 имеет элементы, соответствующие уровню BL4

Общая площадь лабораторных помещений 6090 м²

4.4. Организационная структура учреждения:

I) Общая численность сотрудников, участвующих в национальной программе исследований и разработок в области противобактериологической защиты - 129 человек

II) Классификация сотрудников:

военный персонал - 4 человека

гражданский персонал - 125 человек

III) Классификация сотрудников по категориям:

научные работники - 56

инженеры - 9

техники и рабочие - 27

административный и вспомогательный персонал - 38

IV) Научная специализация научных/инженерных работников
вирусология, биоорганическая химия, биофизика, молекулярная биология, медицина, теоретическая биология

V) Подрядные сотрудники на объекте не работают

VI) Источники финансирования деятельности:

финансирование работ по национальной программе биологической защиты осуществляется Министерством обороны Российской Федерации (через РАО "Биопрепарат").

VII) Уровни финансирования по разделам программы:

исследования - 25%

разработки - 59%

испытания и оценка - 16%

VIII) Политика объекта в отношении публикаций: публикуются патентно-защищенные результаты фундаментальных и прикладных исследований. Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1996 году по результатам протечанной работы:

Тикунов А.В., Головин С.Я., Меламед Н.В., Вязовая Е.А., Ильичев А.А. Экспрессия кДНК альфа-1 антитрипсина человека в клетках E.coli. Бистехнология. - 1996. - N 2. - С. 18-25.

Акименко З.А., Шапров В.В., Самуков В.В., Шемякин В.В., Зернов Ю.П., Шингарева Н.В., Пустошилова Н.М., Блоха В.В., Меденцев Р.А. Структура рекомбинантного фактора некроза опухолей альфа человека, синтезируемого в клетках *E. coli* SG 20050/pTNF 311 дельта. Там же. - № 8. - С. 3-12.

Суслопаров М.А., Белавин И.А., Крендельшиков А.В., Бедристов А.И., Бахтина М.М., Гуторов В.В., Бабкин И.В., Чепурнов А.А. Клонирование и определение первичной структуры генов белков IE2 и pp150 цитомегаловируса человека (HCMV). Молекуляр. генетика, микробиол. и вирусол. - 1996. - № 1. - С. 32-35.

Суслопаров М.А., Крендельшиков А.В., Бахтина М.М., Бедристов А.И., Бабкин И.В., Гуторов В.В., Ерошкин А.М., Мамаева О.А. Клонирование провирусных ДНК-последовательностей вируса Т-клеточного лейкоза человека типа 1 (HTLV-1) из генома культуры клеток MT-4. Там же. - № 2. - С. 32-39.

Андреева И.С., Лебедев Л.Р., Синичкина С.А., Пучкова Л.И., Пустошилова Н.М. Исследование биосинтеза альфа-2-интерферона и факторов некроза опухолей на стадиях культивирования. Там же. - № 3. - С. 23-26.

Тикунова Н.В., Головин С.Я., Микрюков Н.Н., Ильичев А.А. Синтез, клонирование и экспрессия в клетках *Escherichia coli* кДНК альфа-1-антитрипсина человека. Там же. - С. 36-40.

Маренникова С.С., Гашников П.В., Жукова О.А., Рябчикова Е.И., Стрельцов В.В., Рязанкина О.И., Чекунова Э.В., Янова Н.Н., Щелкунов С.Н. Биотип и генетическая характеристика изолята вируса оспы коров, вызвавшего инфекцию ребенка. Там же. - № 4. - С. 6-10.

Жуков В.А., Пьянкова О.Г., Рыжиков А.Б., Воробьев А.А. Прогнозирование коэффициента эпидемиологической эффективности профилактических противовирусных препаратов по данным лабораторных исследований. Вестн. Рос. АМН. - 1996. - № 10. - С. 36-40.

Игнатьев Г.М., Блинов В.М., Романовски В. Изучение протективных свойств аттенуированного штамма аргентинской геморрагической лихорадки. Вopr. вирусол. - 1996. - Т. 41, № 4. - С. 159-161.

Канев А.Н., Воробьева М.С., Шалунова Н.В., Перебоева Л.А., Максюттов А.З., Киселев Н.Н., Шалаев Е.Ю., Ястребова О.Н., Вараксин Н.А. Конструирование стандартных панелей сывороток с нормированным уровнем IgG-антител. Там же. - С. 161-166.

Игнатьев Г.М., Стрельцова М.А., Агафонов А.П., Кашенцева Е.А., Прозоровский Н.С. Экспериментальное изучение возможности лечения ге-

моррагической лихорадки Марбург десфералом, рибавирином и гомологичным интерфероном. Там же. - N 5. - С. 206-209.

Фролов В.Г., Гусев Ю.М. Устойчивость вируса Марбург к процедурам лиофилизации и последующего хранения при разных температурах. Там же. - N 6. - С. 275-277.

Орешкова С.Ф., Манохина О.В., Пучкова Л.И., Репин В.Е., Ильичев А.А. Идентификация и паспортизация штаммов микроорганизмов методом геномной дактилоскопии с использованием биотонированной ДНК фага M13. Генетика. - 1996. - Т. 32, N 6. - С. 740-743.

Серегин С.В., Бабкина И.Н., Нестеров А.Е., Синяков А.Н., Щелкунов С.Н., Сандахчиев Л.С. Вирус натуральной оспы кодирует белок, подавляющий противовирусную активность гамма-интерферона человека. Докл. РАН. - 1996. - Т. 346, N 1. - С. 122-124.

Татьяков С.И., Смирнова О.Ю., Цивковская Н.О., Кищенко Г.П., Ильичев А.А., Петренко В.А., Сандахчиев Л.С. Мутантный гамма-интерферон человека с повышенной антивирусной активностью. Там же. - N 3. - С. 413-414.

Якубоз Л.А., Плясунова О.А., Федюк Н.В., Покровский А.Г., Власов В.В. Ингибирование репродукции вируса иммунодефицита человека анионными красителями. Там же. - Т. 347, N 5. - С. 696-698.

Щелкунов С.Н. Ортопоксвирусный геном: Обзор. Молекуляр. биол. - 1996. - Т. 30, вып. 1. - С. 5-32.

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Ryabchikova E., Kolesnikova L., Sergeev A. Specific features of filovirus infection in respiratory challenged experimental animals. 2nd CB Medical Treatment (Spiez, Switzerland, 7-12 July, 1996): Abstr. - P.28.

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Kostina G.A., Kolokoltsova T.D., Yurchenko N.D., Nechaeva E.A., Radaeva I.F. Effect of nutrient medium factors on production of vaccine obtained by animal cell technology. Animal cell technology: From vaccines to genetic medicine: Abstr. of 14th Meet. Eur. Soc. for Animal Cell Technology (Portugal, Villamoura, 20-24 May, 1996). - SKB-10.

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4.5. Работы, выполняемые в учреждении в области биологической защиты: изучение молекулярно-биологических, антигенных, вирулентных и патогенных характеристик вирусов - возбудителей заболеваний человека; разработка и изучение вакцин, включая генно-инженерные, против вирусных инфекций; разработка диагностических тест-систем для экспресс-анализа вирусных и бактериальных инфекций; разработка приборов и методов изучения аэрозолей в интересах экологии, медицины и ветеринарии.

Работы проводились с возбудителями гриппа, венесуэльского и восточного энцефаломиелита лошадей, геморрагических лихорадок (Марбург, Эбола, Ласса, Мачупо, Боливийская, желтая, конго-крымская, с почечным синдромом), цитомегаловирусной инфекции.

Наружные исследования биологических аэрозолей не проводятся.

5.1. Государственный научно-исследовательский институт биологического приборостроения Министерства здравоохранения РФ.

5.2. Российская Федерация, 123424, Москва, Волоколамское шоссе, 75.

5.3. Помещений с уровнями изоляции BL2, BL3, BL4 нет.

Общая площадь лабораторных помещений - 357 м².

5.4. Организационная структура учреждения

I) Общая численность сотрудников, участвующих в национальной программе исследований и разработок в области биологической защиты - 30 человек

II) Классификация сотрудников:

военный персонал - 1 человек

гражданский персонал - 29 человек

III) Классификация сотрудников по категориям:

научные сотрудники - 10

инженеры - 6

техники и рабочие - 10

административный и вспомогательный персонал - 4

IV) Научная специализация научных/инженерных работников:

приборостроение, дезинфекционное дело.

V) Подрядные сотрудники в учреждении не работают.

VI) Источники финансирования деятельности, осуществляемой в учреждении - финансирование работ по национальной программе биологической защиты осуществляется Министерством обороны Российской Федерации (через РАО "Биопрепарат").

VII) Уровни финансирования по разделам программы:

исследования - 20%

разработки - 80%

испытания и оценка - -

IX) Публикаций в 1996 г. не было.

5.5. Работы, выполняемые в учреждении в области биологической защиты: поиск и создание новых дезинфектантов и методов их применения; разработка образцов технических средств (приборов, наборов реактивов и принадлежностей) для диагностики заболеваний человека и для оценки микробной загрязненности объектов внешней среды.

Наружные исследования биологических аэрозолей не проводятся.

6.1. Научно-исследовательский институт эпидемиологии и микробиологии имени Н.Ф.Гамалеи Российской Академии медицинских наук (НИИ эпидемиологии и микробиологии им. Н. Гамалеи РАМН).

6.2. Российская Федерация, 123098, Москва, ул.Гамалеи, 18.

6.3. Площадь лабораторных помещений с разбивкой по уровню изоляции:

BL2 - 746 м²

BL3 - 45 м²

BL4 - нет

Общая площадь лабораторных помещений - 3667 м²

В работе по национальной программе биологической защиты лаборатория с уровнем изоляции BL3 не используется.

6.4. Организационная структура учреждения

I) Общая численность сотрудников, участвующих в национальной программе исследований и разработок в области биологической защиты - 53 человека;

II) Классификация сотрудников:

военный персонал - нет

гражданский персонал - 53 человека

III) Классификация сотрудников по категориям:

научные сотрудники - 29

инженеры - 0

лабораторно-технические работники - 24

административный и вспомогательный персонал - 0

IV) Научная специализация научных/инженерных работников: микробиология, биохимия, эпидемиология, генетика, риккетсиология, иммунология, биология.

V) Подрядные сотрудники в учреждении не работают.

VI) Источники финансирования деятельности, осуществляемой в учреждении - финансирование работ по национальной программе биологической защиты осуществляется Министерством обороны Российской Федерации.

VII) Уровни финансирования по разделам программы:

исследования - 100%

разработки, испытания и оценка - 0

VIII) Политика объекта в отношении публикаций: публикуются патентозащищенные результаты фундаментальных и прикладных исследований. Поощряется опубликование в научной печати материалов исследований.

IX) Перечень общедоступных статей, опубликованных в 1996 году по результатам проделанной работы:

Вертиев Ю.В. Бактериальные токсины: биологическая сущность и происхождение. Журн. микробиол., эпидемиол. и иммунобиологии. - 1996. - N 3 - С. 43-47.

Пронин А.В., Белый Ю.Ф., Деева А.В., Тартаковский И.С. Иммуногенные и протективные свойства белков клеточной стенки *L. monocytogenes*. Там же. - С. 53-57.

Маракуша Б.И., Дарвиш К., Тартаковский И.С. Характеристика штаммов *L. monocytogenes*, выделенных в России и их типирование с помощью пульс-электрофореза. Там же. - С. 60-65.

Варфоломеева Н.А., Ермолаева Л.А., Тартаковский И.С. Получение и характеристика мутантных штаммов *L. monocytogenes*, гиперпродуцирующих факторы патогенности. Тезисы междунар. конф. "Микробное разнообразие: состояние, стратегия сохранения, стратегические проблемы". - Пермь. - 1996. - С. 75-76.

Кормилицина М.И., Мещерякова И.С. Характеристика природного аттенуированного изолята *F. tularensis*. Ж. микробиол. - 1996. - N 2. - С. 3-6.

Шлыгина К.Н. Персистенция *Francisella tularensis* в организме высокочувствительных животных. Там же. - С. 110-112.

Родионова И.В., Мещерякова И.С., Кормилицина М.И. Сравнительный анализ белковых антигенов *Francisella*. Молек. генетика, микробиол., вирусол. Принята к печати в 1996 г.

Мещерякова И.С. Николай Григорьевич Олсуфьев - ученый и гражданин. Занимательные очерки о деятельности и деятелях противочумной системы России и Советского Союза. - М., "Информатика". - 1995. - С. 5-11.

Мещерякова И.С., Савельева Р.А., Барановский П.М. Туляремия. В сб.: "Профилактика и борьба с заразными болезнями, общими для человека и животных". - М. - 1996. - С. 211-225.

Желудков М.М., Шумилов К.В. Бруцеллез. Там же. - С. 20.

Шумилов К.В., Калмыков В.В., Михайлова Ю.Б., Желудков М.М., Толмачева Т.А., Белый М.К., Патракова Т.Г. Случай выявления бруцеллеза собак в России. Ветеринария. - 1996. - N 5. - С. 55-59.

Магамедова Д.А. Патогенетическое и прогностическое значение клинико-иммунологических показателей при бруцеллезе. Автореф. канд. дис. - М. - 1996. - 27 с.

Ковтунов А.И., Салько В.Н., Седова А.Г., Тарасевич И.В., Фетисова Н.Ф., Галимаянов Х.М. Эпидемиология "Астраханской лихорадки". В сб.:

"Вопросы риккетсиологии и вирусологии". - Москва-Астрахань. - 1996. - С. 3-9.

Тарасевич И.В., Макарова В.А. Возбудитель "Астраханской лихорадки" и его место в группе риккетсий клещевой пятнистой лихорадки. Там же. - С. 9-12.

Фетисова Н.Ф., Тарасевич И.В. Экология переносчика возбудителя "Астраханской лихорадки". Там же. - С. 15-21.

Лазарева Е.Н., Малеев В.В., Буркин В.С., Касимова Н.Б., Макарова В.А., Фетисова Н.Ф., Маринин И.Ю., Костев К.А. Клиническая характеристика "Астраханской лихорадки" у детей. Там же. - С. 33-35.

Гришанова А.П., Сулаянц Н.Н., Инкина Т.Е., Ланг М.Ю., Фетисова Н.Ф., Галимаянов Х.М., Аршба Т.Е. Лабораторная диагностика "Астраханской лихорадки". Там же. - С. 42-45.

Тарасевич И.В., Яблонская В.А., Фаталиева С.Ф. Способ получения вакцины против лихорадки Ку. Патент на изобретение N 94003508/13 (003100). - 06 августа 1996 г.

Kormilitsyna M.I., Meshcheryakova I.S. The new vaccine strains (or variants) of *Francisella tularensis*. FEMS. - 1996. - Vol. 13/3. - P. 215-219.

Belyi Y.F., Tartakovskii I.S., Meshcheryakova I.S., Petrosov V.V., Prosorovskii S.V. Live tularemia vaccine confers protection against lethal *Legionella* and *Listeria* infections in experimental animals. Ibid. - P. 211-213.

Tartakovskii I.S., Sinopalnikov A.I., Prosorovskii I.S. Community-acquired pneumonia: etiologic diagnosis and strategy of antibiotic therapy. Proceed. of 11th meeting *Legionella* infections and atypical pneumonias. - Oslo, Norway. - 1996. - P. 149-152.

Tarasevich I.V. Scrub typhus (epidemiology and ecology). Introduction lecture. In: Eds: Kazar J. a. Toman R. Proceedings Vth Intern. Sympos. "Rickettsiae and Rickettsial Diseases". - Bratislava, Slovakia. - 1996. - P. 72-78.

Eremeeva M.E., Ignatovich V.F., Dasch G., Raoult D., Balayeva N.M. Genetic, biological and serological differentiation of *R. prowazekii* and *R. typhi*. Ibid. - P. 43-50.

Roux V., Fournier P.E., Rydkina E.B., Raoult D. Phylogenetic study of the rickettsiae. Ibid. - P. 34-42.

Pantukhina A.N., Petrov V.L., Tarasevich I.V., Makarova V.A., Fetisova N.F. Application of time resolved fluorescence immunoassay

for interspecies serological differentiation of typhus and spotted fever group rickettsiae. Ibid. - P. 57-61.

Balayeva N.M., Ereemeeva M.E., Ignatovich V.F., Rudakov N.K., Reschetnikova T.A., Samoilenco I.E., Yastrebov V.K., Raoult D. Biological and genetic characterization of *R. sibirica* strains. Ibid. - P. 233-238.

Rydkina E.B., Roux V., Balayeva N.M., Raoult D. Determination of the genome size of Ehrlichiae by pulsed-field electrophoresis. Ibid. - P. 318-323.

Tarasevich I.V. Louse-borne typhus fever in Russia: yesterday, today and tomorrow. In: Abstracts of 12-th Sesqui-Annual Meeting of Amer. Soc. for Rickettsiology and Rickettsial Diseases. - Asilomar, USA. - 1996. - abstract N 15.

Demyanova N.G., Emelyanov V.V. Nature of *R. prowazekii* virulence? Ibid. - abstract N 27.

6.5. Работы, выполняемые в учреждении в области биологической защиты: разрабатываются диагностические и вакцинные препараты анатоксины, научно обоснованные схемы вакцинации (против возбудителей ботулизма, Ку-лихорадки); изучается иммуногенность разрабатываемых средств профилактики.

Наружные исследования биологических аэрозолей не проводятся.

7.1. Институт вирусологии им. Д.И. Ивановского Российской Академии медицинских наук.

7.2. Российская Федерация, 123098, Москва, ул. Гамалеи, 16.

7.3. Площадь лабораторных помещений с разбивкой по уровню изоляции:

BL2 - 500 м²

BL3 - 50 м²

BL4 - нет

Общая площадь лабораторных помещений - 1100 м²

В работе по национальной программе биологической защиты лаборатория с уровнем изоляции BL3 не используется.

7.4. Организационная структура учреждения

I) Общая численность сотрудников, участвующих в национальной

программе исследований и разработок в области биологической защиты - 25 человек.

II) Классификация сотрудников:

военный персонал	- нет
гражданский персонал	- 25

III) Классификация сотрудников по категориям:

научные работники	- 11
инженеры	- 2
лабораторно-технические работники	- 10
административный и вспомогательный персонал	- 2

IV) Научная специализация научных/инженерных работников:
вирусология, биохимия.

V) Подрядные сотрудники в учреждении не работают.

VI) Источники финансирования деятельности, осуществляемой в учреждении: финансирование работ по национальной программе биологической защиты осуществляется Министерством обороны Российской Федерации.

VII) Уровни финансирования по разделам программы:

исследования	- 100%
разработки	- -
испытания и оценка	- -

7.5. Работы, выполняемые в учреждении в области биологической защиты: разработка химиотерапевтических средств профилактики и лечения энцефалитов (весенне-летнего клещевого, калифорнийского) и вирусных геморрагических лихорадок (группа лимфоцитарного хориоменингита, Пичинде); разработка средств и методов индикации и идентификации возбудителей вирусных инфекций.

Наружные исследования биологических аэрозолей не проводятся.

Мера укрепления доверия "Д"

Форма "Д"

АКТИВНОЕ СОДЕЙСТВИЕ КОНТАКТАМ
 Планируемые на 1997 год международные конференции, симпозиумы
 семинары и другие аналогичные форумы по обмену

№ п/п	Название конференции, съезда, семинара и т.п.	Проводящая мероприятие организация	Время проведения	Место проведения	Основная тема	Условия участия	Адрес, по которому следует обратиться и N телефона
1	2	3	4	5	6	7	8
1.	Международная конференция, посвященная 100-летию открытия вируса ящура	ВНИИ защиты животных Министерства сельского хозяйства и продовольствия РФ	август	г. Владимир	Обсуждение различных аспектов инфекционной патологии животных	По пригласению	600900, г. Владимир, п/о Юрвецкий ВНИИ защиты животных тел. 6-06-14
2.	Конференция, посвященная 100-летию противочумной службы	Департамент государственного санитарного надзора Министерства здравоохранения НИИЧМ "Микроф"	август-сентябрь	г. Саратов	В соответствии с названием	По пригласению	410601, г. Саратов ул. Университетская, 16 тел. 24-21-31
3.	Конференция "Новые иммунологические препараты в клинической практике"	Департамент государственного санитарного надзора Министерства здравоохранения НИИ эпидемиологии и микробиологии им. Г.Н. Габричевского	сентябрь	г. Москва	Теоретические и практические вопросы разработки и применения иммунобиологических препаратов	По пригласению	125212, Москва, ул. Адмирала Макарова, 10 тел. 452-18-16

1	2	3	4	5	6	7	8
4.	Конференция "Теплоты В, С, D и G - проблемы диагностики, лечения и профилактики"	Российская медицинская академия последипломного образования	октябрь	г. Москва	В соответствии с названием	По приглашению	123836, Москва, ул. Баррикадная, 2 тел. 252-09-01
5.	IX школа "Биологические мембраны: структура и функции"	Научный совет РАН по проблеме "Биологические мембраны" Институт биохимической химии им. М. М. Шемякина и Ю. А. Овчинникова	март	г. Пушкино	Механизмы функционирования мембран в зависимости от их структуры и строения	По приглашению	117871, Москва, ул. Миклухо-Маклая, 16/10 тел. 135-87-41
6.	Школа по биофизике и молекулярной биологии	Петербургский институт ядерной физики РАН	март	г. Гатчина Ленинградская обл.	Методологические вопросы использования современных методов в молекулярной биологии	По приглашению	188350, г. Гатчина Ленинградская обл., ПИЯФ РАН тел. 294-91-93
7.	Совещание "Персистенция микроорганизмов, фундаментальные и прикладные аспекты"	Институт клеточного и внутриклеточного симбиоза Уральского отделения РАН	сентябрь	г. Оренбург	В соответствии с названием	По приглашению	460000, г. Оренбург, ул. Пионерская, 11 тел. 47-54-17

Мера укрепления доверия "Е"

Форма Е

Объявление законодательства, правил и других мер

Предмет	Законода- тельство	Правила	Другие меры	Поправки, внесенные с прошлого года
а) Разработка, произ- водство, накопление запасов, приобрете- ние или сохранение микробных или дру- гих биологических агентов или токси- нов, боеприпасов, оборудования и средств доставки, оговоренных в статье I	Да	Да	Да	Нет
б) Экспорт микроорга- низмов и токсинов х)	Да	Да	Да	Нет
в) Импорт микроорга- низмов и токсинов х)	Нет	Да	Да	Нет

х) Микроорганизмы, патогенные для человека, животных и растений, подпадающие под действие Конвенции.

Мера укрепления доверия "G"

Форма G

Объявление объектов по производству вакцин

Наименование объекта	Местонахождение (почтовый адрес)	Общее описание видов охватываемых заболеваний
1	2	3
Предприятие по производству бактериальных препаратов Московского научно-исследовательского института эпидемиологии и микробиологии им. Г. Н. Габричевского	103006, г. Москва, Успенский переулок, 10	Менингококковая вакцина, типы А и С
Иркутское предприятие по производству иммунобиологических препаратов	664009, г. Иркутск, ул. 3-я Летная, 1а	Гриппозная вакцина
Предприятие по производству бактериальных препаратов Санкт-Петербургского научно-исследовательского института эпидемиологии и микробиологии им. Л. Пастера	197101, г. Санкт-Петербург, пр. Мира, 14	Гриппозная вакцина
Предприятие по производству бактериальных препаратов Омского научно-исследовательского института природно-очаговых инфекций	644080, г. Омск, пр. Мира, 7	Бруцеллезная вакцина Туляреминная вакцина
Иркутский научно-исследовательский противочумный институт Сибири и Дальнего Востока	664047, г. Иркутск, ул. Трилиссера, 78	Холерная вакцина

1	2	3
Ставропольский научно-исследовательский противочумный институт	355106, г. Ставрополь, ул. Советская, 13/15	Чумная вакцина
Предприятие по производству биологических медицинских препаратов А/О "Биомед" им. И. И. Мечникова	143422, Московская область, Красногорский район, поселок Петрово-Дальнее	Вакцина коклюшно-дифтерийно-столбнячная жидкая (АКДС) Анатоксин дифтерийно-столбнячный жидкий (АДС-М) Анатоксин дифтерийный жидкий Анатоксин столбнячный жидкий Вакцина стафилококковая лечебная жидкая (Антифагин)
Федеральное государственное унитарное предприятие "Аллерген"	355105, г. Ставрополь, ул. Биологическая, 30	Вакцина лентоспирозная жидкая Вакцина противотуберкулезная (БЦЖ) сухая
Научно-производственное объединение "Биомед"	614089, г. Пермь, ул. Братская, 177	Вакцина сыпно-тифозная комбинированная Е (ЖКТВ-Е) сухая Вакцина против Ку-лихорадки сухая Анатоксин дифтерийный жидкий Анатоксин дифтерийно-столбнячный жидкий (АДС и АДС-М) Анатоксин стафилококковый жидкий адсорбированный
Федеральное государственное унитарное предприятие "НПО Вирион"	634004, г. Томск, ул. Ивановского, 8	Вакцина против клещевого энцефалита культуральная жидкая Вакцина противосспенная сухая Вакцина против гепатита В

1	2	3
Федеральное государственное унитарное предприятие "НПО Имунопрепарат"	450024, г. Уфа, ул. Новороссийская, 105	Гриппозная вакцина жидкая Вакцина антирабическая сухая Вакцина коклюшно-дифтерийно-столбнячная жидкая (АКДС) Анатоксин дифтерийно-столбнячный жидкий (АДС и АДС-М) Анатоксин дифтерийный жидкий Анатоксин столбнячный жидкий
Московское предприятие по производству бактериальных препаратов	109088, г. Москва, ул. 1-я Дубровская, 15	Вакцины коревая и паротитная культуральные сухие
Экспериментально-производственное предприятие по производству бактериальных и вирусных препаратов Института полиомиелита и вирусных энцефалитов им. М.В. Чумакова	142782, Московская область, Ленинский район, п/о Института полиомиелита (27 км Киевского шоссе)	Вакцина полиомиелитная 1,2,3 типов, пероральная Вакцина против желтой лихорадки сухая Вакцина против клещевого энцефалита сухая Вакцина антирабическая сухая
Научно-исследовательский институт микробиологии Министерства обороны РФ	610024, г. Киров, Октябрьский пр., 119	Вакцины чумная и сибиреязвенная
Государственный научный центр вирусологии и биотехнологии "Вектор"	633159, Новосибирская обл., Новосибирский район, пгт Кольцово	Вакцины против гепатитов А, В кори, клещевого энцефалита
Предприятие Научно-исследовательского института эпидемиологии и микробиологии им. Н.Ф. Гамалеи	123098, Москва, ул. Гамалеи, 18	Вакцина противотуберкулезная сухая (БЦЖ и БЦЖ-М)

SLOVAK REPUBLIC

(12 May 1997)

The Permanent Mission of the Slovak Republic to the United Nations presents its compliments to the United Nations Centre for Disarmament Affairs and has the honour to transmit herewith the information concerning monitoring of activities under the BTWC in the Slovak Republic.

Best copy available

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

MEASURE	Nothing to declare	Nothing new to declare
A, part 1		✓
A, part 2 (i)	✓	
A, part 2 (ii)	✓	
A, part 2 (iii)	✓	
B (i)		
B (ii)	✓	
C	✓	
D	✓	
E		✓
F	✓	
G		✓

(Please mark the appropriate box(es) for each measure, with a tick.)

Date: April 25, 1997

State Party to the Convention: the Slovak Republic

Form B (i)

Background Information on Outbreaks of
Reportable Infectious Diseases

A) Human diseases

Number of cases per year

Diseases	1993	1994	1995	1996
Typhoid fever	2	6	2	3
Salmonella infections	12 401	17 239	17 717	15 855
Shigella infections	3 139	3 474	1 899	968
Enterotriticones	553	536	463	552
Amoebiasis	2			1
Int. parasite diseases	1 566			795
Diarrhoeal diseases	4 477	5 014	4 804	5 109
Tuberculosis	1 797	38	26	
Tularemia	17	24	152	74
Bact. zoonosis	29			
Peritonitis	702	56	10	135
Scarlatina	1 732	1 538	1 363	894
Erysipelas	1 035			761
Meningococcal	20	16	34	90
Tetanus	1	1	1	1
Actinomycosis	6			7
Slow virus	1	6	3	4

Form B (i)

CONTINUED

A) Human diseases

Number of cases per year

Disease	1993	1994	1995	1996
Viral meningitis	81	103	91	138
Viral meningoencephalitis	26	54	20	23
Viral encephalitis	51	60	89	102
Varicella (Smallpox)	31 444	28 331	24 453	22 769
Herpes zoster	3 439	3 249	3 076	3 043
Herpes simplex	389			562
Morbilli (Measles)	551	29	2	0
Rubella	79	67	1 004	221
Hepatitis A	2 112	277	1 346	1 011
Hepatitis B	33	157	132	45
Hepatitis (NBC)	187	113	63	122
Parvitis epidemica	281	136	189	256
Mononucleosis infec.	715	952	1 074	1 010
Conjunctivitis viralis	484			1
Q fever	127			4
Malaria	3	4	5	2
Toxoplasmosis	288	412	504	568

Form B (i)

CONTINUED

A) Human diseases

Number of cases per year

Diseases	1993	1994	1995	1996
Morbus Timæ	740	506	602	897
Leptospirosis	26	36	42	26
Scabies	6 290	6 346	6 907	5 291
Helminthosis	2 970	33	24	2 956
Mycosis	230	149	163	201
Syphilis	56		26	
Gonorrhoea	1 347	37	34	
AIDS	3	9	11	11
HIV pozit.	38	38	46	50

SOUTH AFRICA

(14 April 1997)

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE
FOR USE IN THE INFORMATION EXCHANGE.

MEASURE	<u>NOTHING TO DECLARE</u>	<u>NOTHING NEW TO DECLARE</u>
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A. PART 1		✓
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A. PART 2 (I)		✓
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A. PART 2 (II)		✓
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A. PART 2 (III)		✓
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B. (I)		
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B. (II)		
---------	--	--

C		✓
---	--	---

D		✓
---	--	---

E		✓
---	--	---

F		✓
---	--	---

G		✓
---	--	---

DATE 1997

STATE PARTY TO THE CONVENTION : REPUBLIC OF SOUTH AFRICA

CONFIDENCE BUILDING MEASURE "A"

FORM A PART 1

EXCHANGE OF DATA ON RESEARCH CENTRES AND LABORATORIES

Nothing new to declare.

CONFIDENCE BUILDING MEASURE "A"FORM A, PART 2 (I)NATIONAL BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAMME
DECLARATION

Nothing new to declare.

CONFIDENCE BUILDING MEASURE "A"

FORM A PART 2 (ii)

NATIONAL BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAMME
DECLARATION

Nothing new to declare.

FORM A, PART 2 (iii)NATIONAL BIOLOGICAL DEFENCE RESEARCH AND DEVELOPMENT PROGRAMME
DECLARATION FACILITIES

Nothing new to declare.

CONFIDENCE BUILDING MEASURE "B"FORM B (I)BACKGROUND INFORMATION ON OUTBREAKS OF REPORTABLE INFECTIOUS DISEASES

Note : The figures for 1996 only cover the period from January to October. Figures for the last three months were not available in time due to administrative problems

NUMBER OF CASES PER YEAR

DISEASE	1991	1992	1993	1994	1995	1996
Anthrax	0	0	0	0	3	0
Brucellosis	15	37	2	20	6	1
Cholera	2	12	4	5	0	0
Congenital Syphilis	138	735	80	913	862	225
Crimean Congo Haemorrhagic Fever	6	5	0	4	1	2
Diphtheria	12	3	2	1	6	0
Food Poisoning	138	81	6	207	323	88
Legionellosis	14	2	2	4	0	0
Leprosy	34	66	4	89	49	11
Malaria	4 693	2 827	1180	10 288	4 784	29160
Measles	4 777	19 327	1 180	3 819	5 071	6501
Meningococcal Infection	816	525	34	362	348	309
Paratyphoid Fever	1	0	1	7	6	0
Poisoning Agricultural Stock Remedies	154	139	13	166	115	82
Poliomyelitis	2	0	0	0	0	0
Rabies	20	25	2	7	5	8
Rheumatic Fever	41	29	3	30	20	24
Tetanus	85	64	4	33	23	13
Tetanus Neonatorum	8	10	6	15	3	5

DISEASE	1991	1992	1993	1994	1995	1996
Trachoma	269	459	34	62	61	19
Tuberculosis						
Primary	4 303	4 894	375	7 222	6 191	3 511
Pulmonary	70 246	67 452	6 522	79 532	65 478	43 126
Other Respiratory Organs	765	965	87	1 935	1 479	918
Meninges	365	336	24	396	307	187
Intestines	124	71	14	84	101	50
Bones & Joints	183	140	6	139	110	72
Genito-urinary System	48	63	3	84	55	43
Other Organs	1 479	2 035	83	767	707	404
Miliary	198	167	21	242	222	165
Tuberculosis Total	77 705	76 121	7 135	90 401	74 650	48 476
Typhoid Fever	1 624	1 211	312	1 118	653	359
Typhus Fever (Lice Borne)	0	0	0	0	1	1
Typhus Fever (Rat flea Borne)	0	0	0	0	1	2
Viral Hepatitis A	1 600	1 306	71	888	730	752
Viral Hepatitis B	723	619	32	481	434	265
Viral Hepatitis Non A Non B	25	25	7	59	21	8
Viral Hepatitis Unspecified	535	336	29	232	119	92
Viral Hepatitis Total	2 883	2 286	139	1 660	1 304	1 117
Whooping Cough	---	---	---	64	51	14

N/A : Not Available

There were no outbreaks of infectious diseases and similar occurrences, that seem to deviate from the normal pattern during 1996

CONFIDENCE BUILDING MEASURE "C"

ENCOURAGEMENT OF PUBLICATION OF RESULTS AND PROMOTION OF USE OF
KNOWLEDGE

Scientists in SA are in no way restricted to publish the results of their work in scientific journals as long as it does not affect national and commercial interests.

CONFIDENCE BUILDING MEASURE "D"

ACTIVE PROMOTION OF CONTACTS

South Africa does not plan any activities under this measure.

CONFIDENCE BUILDING MEASURE "E"

FORM E

DECLARATION OF LEGISLATION, REGULATIONS AND OTHER MEASURES

Nothing new to declare.

CONFIDENCE BUILDING MEASURE "F"

DECLARATION OF PAST ACTIVITIES IN OFFENSIVE AND OR DEFENSIVE
RESEARCH AND DEVELOPMENT PROGRAMMES

1. Date of entry into force of the convention for the state party :

Signed : 10 April 1972.

Ratified : 3 November 1975.

2. Past offensive biological research and development programmes :

Nothing new to declare

CONFIDENCE BUILDING MEASURE "G"

FORM G

DECLARATION OF VACCINE PRODUCING FACILITIES

Nothing new to Declare

SWEDEN

(23 April 1997)

The Permanent Mission of Sweden to the United Nations presents its compliments to the Centre for Disarmament Affairs at the United Nations and, with reference to the Final Document of the Third Review Conference (1991) on BTWC, has the honour to submit the attached information. The information covers the year 1996.

At the Third Review Conference it was agreed that all States Parties present the following declaration:

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange

Measure	Nothing to declare	Nothing new to declare
A, part 1	☐	☒
A, part 2(i)	☐	☒
A, part 2(ii)	☐	☒
A, part 2(iii)	☐	☐
B (i)	☐	☐
B (ii)	☐	☒
C	☐	☒
D	☐	☒
E	☐	☒
F	☐	☒
G	☐	☒

(Please mark the appropriate box(es) for each measure, with a tick.)

Date 21 APRIL 1997

State Party to the Convention Sweden

Confidence-building measure A part 2 (iii) para (IX)

For the facilities previously declared lists of publications for 1996 are enclosed.

Publication of results of relevant biological research at FOA NBC Defence

Results of biological research directly related to the convention performed at the National Defence Research Establishment in Umeå are encouraged to be published in international journals. Some work are also published as public FOA-reports, abstract of which are submitted to the NTIS Database (National Technical Information Service). Reprints of scientific papers and FOA-reports may be ordered by writing to:

National Defence Research Establishment, S-901 82 Umeå, Sweden.

1996

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- Lundkvist Å., H. Kallio-Kokko, K. Brus-Sjölander, H. Lankinen B. Niklasson, A. Vaheri, and Valpalathi O. 1996. Characterization of Puumala virus nucleocapsid protein: Identification of B-cell epitopes and domains involved in protective immunity. *Virology* 216:397-406.

- Lundkvist Å., M. Hukic, J. Hörling, M. Gilljam, S. Nichol, and B. Niklasson. 1996. Puumala and Dobrava viruses cause hemorrhagic fever with renal syndrome (HFRS) in Bosnia Herzegovina. J. Infect. Dis. submitted.
- Lundkvist Å., O. Vapalathia, A. Plyusnin, K. Brus-Sjölander, B. Niklasson, and A. Vaheri. 1996. Characterization of Tuula virus antigenic determinants defined by monoclonal antibodies raised against baculovirus-expressed nucleocapsid protein. Virus Research 45:29-44.
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- Schesser, K., E. Frithz-Lindsten, and H. Wolf-Watz. 1996. Delineation and Mutation Analysis of the *Yersinia pseudotuberculosis* YopE Domains Which Mediate Translocation across Bacterial and Eukaryotic Cellular Membranes. J. Bacteriol. 178:7227-7233.
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- Yoshimatsu, K., J. Arikawa, M. Tamura, R. Yoshida, Å. Lundkvist, B. Niklasson, H. Karlwa, and I. Azuma. 1996. Characterization of the nucleocapsid protein of Hantaan virus strain 76-118 using monoclonal antibodies. J. Gen. Virol. 77:695-704.

Form A, part 1Exchange of data on research centres and laboratories 1/

1. Name(s) of facility^{2/} Swedish Institute for Infectious Disease Control (SILDC)
2. Responsible public or private organization or company Ministry of Health
3. Location and postal address Lundagatan 2, Solna (location)
S-105 21 STOCKHOLM (postal address)
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Ministry of Defence
Ministry of Health and Ministry of Defence (salary for a lead in the medical staff)
5. Number of maximum containment units ^{3/} within the research centre and/or laboratory, with an indication of their respective size (m²)
One of the P3 labs is equipped with a class III cabinet system (50 sqm) for diagnostic P4 work.
6. If no maximum containment unit, indicate highest level of protection
P3
7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate
Research on diagnostic methods for uncommon pathogenic bacteria and vector borne viruses causing i.e. diarrhoea and haemorrhagic fevers.

-
- 1/ The containment units which are fixed patient treatment modules, integrated with laboratories, should be identified separately.
 - 2/ For facilities with maximum containment units participating in the national biological defence research and development program, please fill in name of facility and mark "Declared in accordance with Form A, part 2 (iii)".
 - 3/ In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

1997-02-11

BilagaFÖR publikationslista 1996

Lundström JO, Niklasson B. Ockelbo virus (Togaviridae: Alphavirus) neutralizing antibodies in experimentally infected birds. *J Wildlife Disease* 32, 1 p. 87-93, 1996.

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Updated list of reported cases of infectious diseases in Sweden according to the communicable diseases act is enclosed. The list has been prepared by the Swedish Institute for Infectious Disease Control (SIIDC).

Ar för annämlan Year of report	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Folkmedelings i essential Population (thousands)	3382	3414	3459	3527	3590	3644	3692	3781	3827	prei
Pest Plague	0	0	0	0	0	0	0	0	0	0
Kolera Cholera	2	0	0	0	0	1	0	1	1	0
Gula febern Yellow fever	0	0	0	0	0	0	0	0	0	0
Rabies* Rabies*	0	0	0	0	0	0	0	0	0	0
Fläckfeber Typhus fever	0	0	0	0	0	0	0	1	1	0
Återfallsfeber Relapsing fever	0	0	0	0	0	0	0	0	0	0
Mjältbrand Anthrax	0	0	0	0	0	0	0	0	0	0
Legionellos* Legionellosis*			18	36	75	72	42	39	44	55
Tyfoïd Typhoid fever	34	26	31	32	28	24	22	16	30	23
Paratyfoïd Paratyphoid fever	37	55	42	44	54	42	22	27	29	15
Salmonellos Salmonellosis	3904	5254	5005	5706	5534	5159	4344	5097	3562	3861
Shigellos Shigellosis	627	638	768	913	686	1007	735	698	561	565
Amöbadyfenteri Amoebiasis	924	866	1072	2299	1755	3830	2267	1038	527	441
Campylobacter* Campylobacteriosis*			1861	4006	4275	4475	4485	5529	5580	5081
Giardiasis* Giardiasis*			1465	3765	2987	7468	4061	1981	1505	1506
Meningokocksjukdom Meningococcal infection	95	80	103	102	130	114	88	66	75	102
Polio Polioepidemi	0	0	0	0	0	1	0	0	0	0
Serös meningit** Aseptic meningitis**	554	620	118							
Viral hämorrh feber* Viral haemorrhagic fever*			0	1	0	0	0	0	0	0
Nekropsia epidemica Nephropathia epidemica*			20	67	197	202	137	112	213	196
Hepatit A Hepatitis A	215	278	245	263	294	274	274	344	600	489
Hepatit B akut Hepatitis B acute	313	222	266	257	254	207	211	264	294	185
Hepatit B smitt. Hepatitis B carriers	575	552	1014	1966	1469	3039	1996	1147	1059	767
Hepatit Non A Non B Hepatitis non A non B	114	79	104	109	145	258	19	2	2	3
Hepatit C Hepatitis C				459	2359	4537	4028	3726	2872	2613
Hepatit Delta Delta hepatitis	7	7	5	10	12	5	5	5	8	9
Hepatit E Hepatitis E							5	4	6	5
Infekt eryp mykobakt* Mycobacteriosis, atypical*			52	91	79	123	170	212	133	188
Tuberkulos**** Tuberculosis****										306
(Tuberkulos)****	545	536	595	557	519	611	619	529	564	531
Lepra** Leprosy**	1	5	0							
Leptospiros** Leptospirosis**	0	3	1							
Ornithos Ornithosis	132	85	78	41	52	52	50	55	56	25
Listerio Listeriosis	60	30	23	13	28	27	35	34	34	23
Tularemia Tularemia	22	22	24	0	2	2	7	7	133	48
Brucellosis** Brucellosis**	1	1	1							
Difteri sjukdomsfall Diphtheria, clinical cases	3	3	0	0	0	0	0	0	0	0
Difteri smittbärare Diphtheria, carriers	1	4	0	0	0	0	0	0	0	0
Tetanus Tetanus	1	1	0	3	1	0	1	1	3	3
Botulism Botulism	0	0	0	1	2	0	0	2	1	1
Filarios** Filariasis**	3	2	0							
Schistosomiatis** Schistosomiasis**	48	57	22							
Trichinos Trichinosis	0	0	0	0	1	0	0	0	0	0
Malaria Malaria	119	169	180	205	149	124	143	160	161	189
Toxoplasmos Toxoplasmosis	22	19	27	22	17	17	8	6	8	16
Syfilis medfödd Syphilis, congenital	3	1	1	0	3	3	0	0		

SWITZERLAND

(15 April 1997)

The Permanent Observer Mission of Switzerland to the United Nations presents its compliments to the Secretariat-General of the United Nations, Centre for Disarmament Affairs, and has the honour to forward the information exchange and other data according to the Final Declaration of the Third Review Conference of the BWC as follows:

- Declaration form on nothing to declare or nothing new to declare
- Exchange of information on outbreaks of infectious diseases and similar occurrences caused by toxins
- Background information on outbreaks of reportable infectious diseases in Human
- Background information on outbreaks of reportable infectious diseases in animals

DECLARATION FORM ON NOTHING TO DECLARE OR NOTHING NEW TO DECLARE

Measure	Nothing to Declare	Nothing New to Declare
A Part 1	☐	☒
A Part 2(i)	☐	☒
A Part 2(ii)	☐	☒
A Part 2(iii)	☒	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☐	☒
D	☒	☐
E	☐	☒
F	☒	☐
G	☐	☒

(Please mark the appropriate box(es) for each measure with a tick)

Date: 7 April 1997

State Party to the Convention: **Switzerland**

Exchange of Information on Outbreaks of Infectious Diseases and Similar Occurrences Caused by Toxins

General remarks:

1. Human diseases

The Swiss *Bundesamt für Gesundheitswesen* (Federal Office for Public Health) is responsible for the surveillance and reporting of diseases. A nationwide notification system is regulated by the "*Verordnung ueber die Meldung übertragbarer Krankheiten des Menschen*" (Decree on the Notification of Communicable Human Diseases), dated September 1987, which is based on the "*Gesetz über die Bekämpfung übertragbarer Krankheiten des Menschen*" (Law on the Control of Communicable Human Diseases).

On the basis of this decree every medical practitioner is obliged to report the occurrence of certain notifiable diseases. In addition medical laboratories have to report the identification of notifiable agents. The results of this survey are published in the weekly *Bulletin des Bundesamtes für Gesundheitswesen*. The *Bulletin* which also contains detailed reports on the epidemiological situation in the country, is transmitted to the World Health Organisation.

The figures given in Form B (I) -1 are based on the annual compilation of notifiable diseases and infectious agents published in the *Bulletin*.

In 1996 Switzerland has not suffered of outbreaks of communicable human diseases that deviate from the normal pattern.

2. Animal diseases

According to the "*Gesetz über die Bekämpfung der Tierseuchen*" (Law on the Control of Animal Epidemics) and the corresponding decree certain animal diseases have to be reported to the *Bundesamt für Veterinärwesen* (Federal Veterinary Office), which in turn is responsible for the reporting to the OIE (Office International des Epizooties) concerning the diseases covered by the A- and B-list of the OIE. Epidemiological data are regularly published in the weekly *Bulletin des Bundesamtes für Veterinärwesen* (Bulletin of the Federal Veterinary Office). The figures given in Form B (I) -2 are based on the annual compilation of notifiable diseases in this bulletin.

In 1996 Switzerland has not suffered of outbreaks of communicable animal diseases that deviate from the normal pattern.

3. Plant diseases

The *Bundesamt für Landwirtschaft* (Federal Office of Agriculture) reports regularly to the EPPO (European Plant Protection Organisation) concerning the occurrence of communicable plant diseases. Certain plant diseases are notifiable according to *Landwirtschaftsgesetz* (Law on Agriculture) and the corresponding *Verordnung über Pflanzenschutz* (Decree on Plant Protection).

In 1996 Switzerland has not suffered of outbreaks of communicable plant diseases that deviate from the normal pattern.

Form B (i)-1

Background information on outbreaks of reportable infectious diseases in Human

Disease / Infectious agent identified	1992	1993	1994	1995	1996	Ø 92-96
Bacterial:						
Anthrax/B.anthraxis	0	0	0	0	0	0
Brucella species	30	22	23	26	18	24
Clostridium botulinum	0	0	12	0	0	2
Corynebacterium diptheriae	0	0	0	0	0	0
Francisella tularensis	1	0	0	2	2	1
Leptospira species	7	6	6	4	2	5
Plague	0	0	0	0	0	0
Salmonella paratyphi	19	13	20	10	8	14
Salmonella typhi	47	29	37	37	25	35
Shigella species	499	516	547	533	439	507
Tetanus	1	3	3	2	3	2
Vibrio cholerae	1	2	0	0	0	1
Rickettsial/Chlamydial:						
Chlamydia psittaci	6	14	15	2	1	8
Coxiella burnetii	19	10	16	14	13	14
Rickettsia species	18	7	6	8	7	9
Viral:						
Dengue-Fever	1	2	17	19	18	11
Tick-borne-encephalitis-Virus	66	53	97	60	62	68
Smallpox	0	0	0	0	0	0
Viral Hemorrhagic Fever	0	0	0	0	0	0
Yellow-Fever	0	0	0	0	0	0
Protozoal:						
Malaria/Plasmodium species	263	286	315	292	293	290
Toxoplasma gondii	508	553	456	454	485	491

Form B (i) -2

Background information on outbreaks of reportable infectious diseases in animals

Disease / Infectious agent identified	1992	1993	1994	1995	1996	Σ 92-96
African swine fever	0	0	0	0	0	0
Anthrax	0	0	1	0	0	0
Aujeszky's disease	0	0	0	0	0	0
Bluetongue	0	0	0	0	0	0
Brucellosis, bovine	0	0	0	0	1	0
Brucellosis, caprine and ovine	0	0	0	0	0	0
Foot and mouth disease	0	0	0	0	0	0
Goat pox	0	0	0	0	0	0
Hog cholera (swine fever)	0	5	0	0	0	1
Newcastle disease	0	0	1	2	5	2
Peste des petits ruminants	0	0	0	0	0	0
Rabies	120	168	225	23	5	108
Rift Valley Fever	0	0	0	0	0	0
Rinderpest	0	0	0	0	0	0
Sheep pox	0	0	0	0	0	0
Swine vesicular disease	0	0	0	0	0	0
Teschen disease	0	0	0	0	0	0
Vesicular stomatitis	0	0	0	0	0	0

UNITED STATES OF AMERICA

(15 April 1997)

REPORT OF THE UNITED STATES OF AMERICA
TO THE UNITED NATIONS DEPARTMENT OF DISARMAMENT AFFAIRS

Information submitted pursuant to the procedural modalities agreed upon in April 1987 at the "Ad Hoc Meeting of Scientific and Technical Experts from States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction" as amended by the States Parties at the September 1991 Third Review Conference

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**REPORT OF THE UNITED STATES OF AMERICA TO THE UNITED NATIONS DEPARTMENT FOR
DISARMAMENT AFFAIRS**

Pursuant to the procedural modalities agreed upon in April 1987 at the "Ad Hoc Meeting of Scientific and Technical Experts from States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction," the United States of America submits the following information on seven items under Article V of the Convention:

- Item 1: **CONFIDENCE BUILDING MEASURE A, PART 1.**
 Exchange of Data on Research Centers and Laboratories
- CONFIDENCE BUILDING MEASURE A, PART 2.**
 Exchange of Information on National Biological Defense Research and Development Programs (Annex I)
- Item 2: **CONFIDENCE BUILDING MEASURE B**
 Exchange of Information on All Outbreaks of Infectious Diseases and Similar Occurrences Caused by Toxins

No reportable outbreaks were identified in 1994. (See Annex II)

- Item 3: **CONFIDENCE BUILDING MEASURE C**
 Encouragement of Publication of Results and Promotion of Use of Knowledge (Annex III)

It is U.S. policy regarding the publication of results relevant to Items 1 and 2 above to encourage researchers to publish the results of their studies in national and international science journals readily available to the scientific community.

- Item 4: **CONFIDENCE BUILDING MEASURE D**
 Active Promotion of Contacts (Annex IV)
- Item 5: **CONFIDENCE BUILDING MEASURE E**
 Declaration of Legislature, Regulations and Other Measures (Annex V)
- Item 6: **CONFIDENCE BUILDING MEASURE F**
 Declaration of Past Activities in Offensive and/or Defensive Biological Research Programs (Annex VI)
- Item 7: **CONFIDENCE BUILDING MEASURE G**
 Declaration of Licensed Human Vaccine Production Facilities (Annex VII)

1. Declaration form on Nothing to Declare or Nothing New to Declare for use in the information exchange.

Measure	Nothing to declare	Nothing new to declare
A, part 1 ☐	☐	☐
A, part 2 (i)	☐	☐
A, part 2 (ii)	☐	☐
A, part 2 (iii)	☐	☐
B (i)	☐	☐
B (ii)	☒	☐
C	☐	☐
D	☐	☒
E	☐	☒
F	☐	☐
G	☐	☐

(Please mark the appropriate box(es) for each measure, with a tick.)

Date April 15, 1997

State Party to the Convention United States of America

ANNEX I

CONFIDENCE BUILDING MEASURE A (Part 1)

Exchange of Data on Research Centers
and Laboratories

United States of America

April 1997

Form A. Part 1

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

1. Name(s) of the research center and/or laboratory National Institutes of Health (NIH)
2. Responsible public or private organization or company Public Health Service
3. Location and postal address Bethesda, Maryland, USA
Director, Division of Safety
Bldg. 31, Room 1C02
National Institutes of Health
Bethesda, Maryland 20892
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense:

Public Health Service (entirely)
5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters):

The Class III system in Building 41A has been permanently closed. The space will be renovated for use as a maximum containment unit that will utilize a suit system instead of Class III cabinet lines. Estimated completion - Summer-1997. The overall size of the building will not change.
6. If no maximum containment unit, indicate highest level of protection:

Not Applicable
7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:

This small laboratory is available to NIH scientists for special biomedical research studies under BL4 containment conditions.

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, Part 1

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

1. Name(s) of the research center and/or laboratory
National Cancer Institute (NCI)
Frederick Cancer Research and Development Center (FCRDC)
2. Responsible public or private organization or company
National Cancer Institute
National Institutes of Health
U.S. Dept. Of Health and Human Services
3. Location
and
postal address
National Cancer Institute-Frederick
Cancer Research and Development Center
P.O. Box B
Frederick, Maryland 21702-1201
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense:
Department of Health and Human Services
Public Health Service (entirely)
5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters):
Decommissioned. All Class III cabinets within the approximately 182.5 square meter BL4 facility were removed from the facility December 1994. As of February 1995, that portion of the facility formerly containing the Class III cabinet system has been utilized as a store room within a BSL-2 animal facility.
6. If no maximum containment unit, indicate highest level of protection:
BSL-3
7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:
A total of 25 BSL-3 laboratories occupying approximately 1408 square meters are located on the campus of the NCI-FCRDC. The majority of these laboratories are supporting Human Immunodeficiency Virus (HIV) research. One BSL-3 Laboratory (850 square meters) is located in a facility dedicated to the study of neurological diseases.
Past activities included in the BSL-4 facility included: cloning of Herpes simplex type 1 DNA fragments in a bacteriophage lambda vector (1978); assessment of risk studies using polyoma virus (1978-79); cloning diphtheria toxin - melanocyte hormone in *Escherichia coli* and testing of the transformants in mice and guinea pigs.

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, Part 1

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

1. Name(s) of the research center and/or laboratory
National Center for Infectious Diseases (NCID) of the Centers for Disease Control and Prevention (CDC)
2. Responsible public or private organization or company
Centers for Disease Control and Prevention (CDC)
3. Location and postal address
Atlanta, Georgia, USA
National Center for Infectious Diseases
1600 Clifton Road
Atlanta, Georgia 30333
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense:

Public Health Service (entirely)
5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters):

Laboratory was constructed in 1988 and contains a separate BL4 area having an estimated 678 square meters of floor space, (including animal facilities). (No Change).
6. If no maximum containment unit, indicate highest level of protection:

Not Applicable
7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:

Viral research and related animal vector research, primarily in the field of hemorrhagic viral disease. Development of candidate vaccines, diagnostic reagents and basic studies on the characteristics and epidemiology of these viruses.

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A. Part 1

EXCHANGE OF DATA ON RESEARCH CENTERS AND LABORATORIES

1. Name(s) of the research center and/or laboratory Plum Island Animal Disease Center
2. Responsible public or private organization or company U.S. Department of Agriculture
3. Location Plum Island is located about 1.5 nautical miles off the northeastern end of Long Island, New York
and Plum Island Animal Disease Center
postal address P.O. Box 848
Greenport, Long Island
New York 11944-0848
4. Source(s) of financing of the reported activity, including indication if the activity is wholly or partly financed by the Department of Defense:
U.S. Department of Agriculture (entirely)
5. Number of maximum containment units* within the research center and/or laboratory, with an indication of their respective size (square meters):
The Animal Disease Center consists of two biocontainment buildings at BL3 (18,580 and 1,091 square meters of floor space, respectively).
6. If no maximum containment unit, indicate highest level of protection:
The Center has the following features of a BL4 facility: biowaste treatment plant; complete clothing change and shower facilities; single pass air; double door sterilizers at building exit zones; HEPA filtered exhaust air in all laboratories and in 40 percent of animal rooms; certified incinerators for pathological wastes. The following features of a BL4 facility are lacking: operational Class III gas-tight glove box; ventilated personnel suit room.
7. Scope and general description of activities, including type(s) of microorganisms and/or toxins as appropriate:
Diagnosis of, and research on, animal diseases which do not occur in the United States (such as foot-and-mouth disease virus). This facility maintains a reference repository of animal disease agents (and diagnostic capabilities to recognize them should they occur in the United States).

* In accordance with the 1983 WHO Laboratory Biosafety Manual, or equivalent.

Form A, Part 1
Exchange of Research Data on Research Centers and Laboratories

- 1. Name of facility.**

U.S. Army Medical Research Institute of Infectious Diseases
- 2. Responsible public or private organization or company.**

U.S. Army Medical Research and Materiel Command
- 3. Location and postal address.**

COMMANDER
USAMRIID
1425 Porter St.
Fort Detrick
Frederick, MD 21702-5011
- 4. Source of financing of the reported activity, including indication if an activity is wholly or partly financed by the Ministry of Defense.**

U.S. Department of Defense (entirely)
- 5. Number of maximum containment units within the research center and/or laboratory, with an indication of their respective size.**

BL4 laboratory (979 sqM)
- 6. If no maximum containment, indicate highest level of protection.**

N/A
- 7. Scope and general description of activities, including type(s) of micro-organisms and/or toxins as appropriate.**

Conduct studies on basic mechanism of action of hazardous viruses and classical biological agents. Perform exploratory and advanced development of protective and therapeutic countermeasures.

ANNEX I

CONFIDENCE BUILDING MEASURE A
Part 2 (i)

Exchange of Information on National Biological Defense Programs

United States of America

April 1997

Form A: Part 2 (i)NATIONAL BIOLOGICAL DEFENSE RESEARCH AND
DEVELOPMENT PROGRAM DECLARATION

1) Is there a national program to conduct biological defense research and development within the territory of the State Party, under its jurisdiction or control anywhere? Activities of such a program would include prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxinology, physical protection, decontamination and other related research.

Yes / No

If the answer to (1) is Yes, complete Form A: part 2 (ii) which will provide a description of the program.

ANNEX I

CONFIDENCE BUILDING MEASURE A
Part 2 (ii)

Exchange of Information on National Biological Defense

United States of America

April 1997

Form A, Part 2(ii)
National Biological Defense Research and Development Program

The DoD Medical Biological Defense
Research and Development Program

II. Description

- 1. State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.**

The objectives of the DoD Medical Biological Defense Research Program (MBDRP) are to develop measures for the diagnosis, prevention and treatment of potential biological threat agents. Development of medical therapeutic measures, and patient treatment and management protocols are important components of the program. The purpose of the program is to maintain and promote a solid national defense posture with respect to potential biological threats. The program supports research, development, test and evaluation (RDT&E) efforts necessary for the development of defensive measures and materiel to meet these threats. In addition to promoting the national defense posture, the MBDRP benefits the scientific community in general through its research and the development of diagnostic methods and vaccine and drug therapies for the treatment of diseases. The program does not include the development of any weapons, nor does it attempt to develop new pathogenic organisms for any use. All work conducted under the program is unclassified. However, results, may be classified if they impinge on national security by specifying U.S. military deficiencies, vulnerabilities, or significant breakthroughs in technology.

- 2. State the total funding for the program and its source.**

Total DoD funding for the MBDRP for FY96 was \$35,164,000. Approximately 21% of the FY96 U.S. Army MBDRP budget was spent on extramural contracts. The Naval Research and Development Command received \$1,145,000 for FY96.

- 3. Are aspects of this program conducted under contract with industry, academic institutions, or in other nondefense facilities:**

Some aspects of the MBDRP are conducted under contract with industry, academic institutions or in other non-defense facilities.

- 4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?**

Approximately 21% of the FY96 U.S. Army MBD RP budget was spent on extramural contracts.

- 5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.**

MBDRP extramural contracts for basic research are designed to support and supplement the in-house program. Contracts are awarded for determining the mechanism of action, pathology, and molecular biology of toxins, viruses and bacteria. Basic research is also being conducted on the application of new technologies for the diagnosis and identification of threats agents and the evaluation of candidate vaccines and toxoids in animal models.

Advanced development of vaccine candidates and diagnostics is now managed by the Joint Program Office for Biological Defense. Specific areas of interest are pre-clinical studies, clinical trials to determine safety, immunogenicity and efficacy.

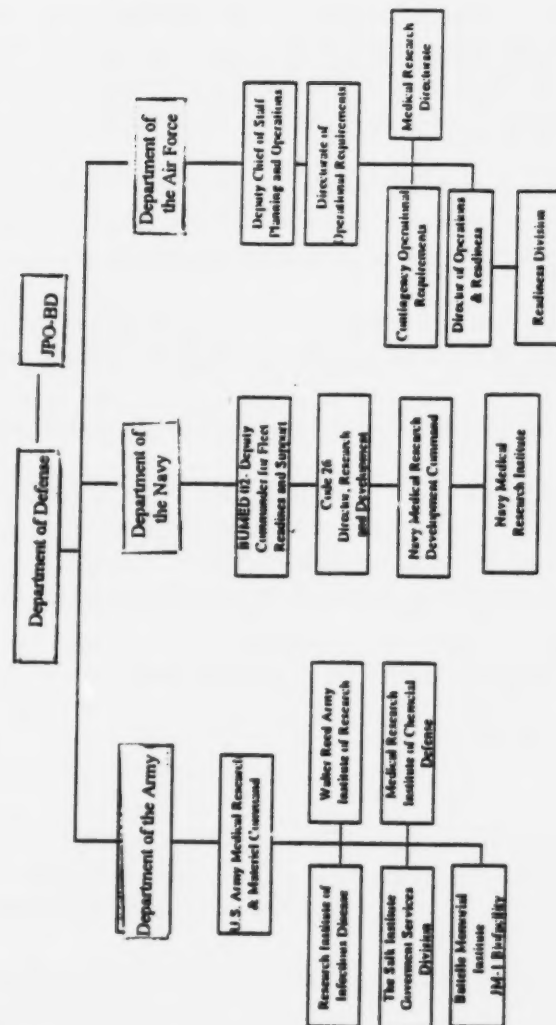
- 6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).**

A chart depicting the organizational structure for the DoD MBD RP is attached.

- 7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.**

See Part 2 (iii)

**Medical Biological Defense Research Program
Organizational Structure**



Form A, Part 2 (ii)
National Biological Defense Research and Development Program

The DoD Biological Defense Research Program

II. Description

1. State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

The Chemical and Biological Defense Command (CBDCOM) is responsible to conduct research, development and engineering efforts which support the development of nonmedical defensive materiel against biological agents. These efforts are executed through the Research, Development and Acquisition Business Area (RDA) of CBDCOM which includes the Edgewood Research, Development and Engineering Center (ERDEC), the Project Manager for Nuclear, Biological and Chemical Defense Systems (PM NBC Defense) and the Program Director for Biological Defense Systems (PDBDS). Efforts are ongoing for the development of detection, identification and warning systems for all known and future chemical and biological (CB) agents, including toxins; eye/respiratory protection systems and support to chemical overgarment programs; air handling and filtration systems for vehicles, vans, shelters and aircraft; and decontamination systems. In addition CBDCOM supports the U.S. efforts for the chemical and biological treaty program in both verification and compliance.

2. State the total funding for the program and its source.

The RDA Business Area, as the executor of the RDA program for CBDCOM, is funded by the Office of the Secretary of Defense to conduct both Chemical and Biological (CB) defense programs as a single entity. Some efforts are applicable to biological defense as well as chemical defense, which makes it difficult to accurately define biological defense funding alone. An estimated \$97.3M was reported to have been obligated in support of the Biological Defense Program during FY 96.

NOTE: The two major contributors to the biological defense program efforts are the ERDEC program funded by OSD under Defense-wide Budget Areas 1-6 and the Office of the Program Director for Biological Defense Systems (OPDBDS) funded through the Joint Program Office for Biological Defense and Counter Proliferation Office, OSD. These efforts support the technology base for the biological program and the development of rapid detection and identification biological agent systems. During FY 96, ERDEC obligated approximately \$22.0M and the OPDBDS obligated approximately \$75.3M in support of the Biological Defense Program.

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other nondefense facilities: Yes.

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

ERDEC - TOTAL	\$22.0M
Contracts	\$ 6.8M
Other Government Agencies	\$ 2.2M
OPDBDS - TOTAL	\$75.3M
Contracts	\$30.5M
Other Government Agencies	\$ 9.1M

5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.

Contractor and other government agency support is obtained on an as-needed basis. Out-of-house support is utilized for antibody development, pathogenicity studies leading to information that could be used for the development of future bio detectors, determination of strain specific mass spectrometric bio-markers, electro-chemiluminescent immunoassay DNA probes, and simpler identification chemistries in addition to design and fabrication of prototype hardware and testing of biodetection systems.

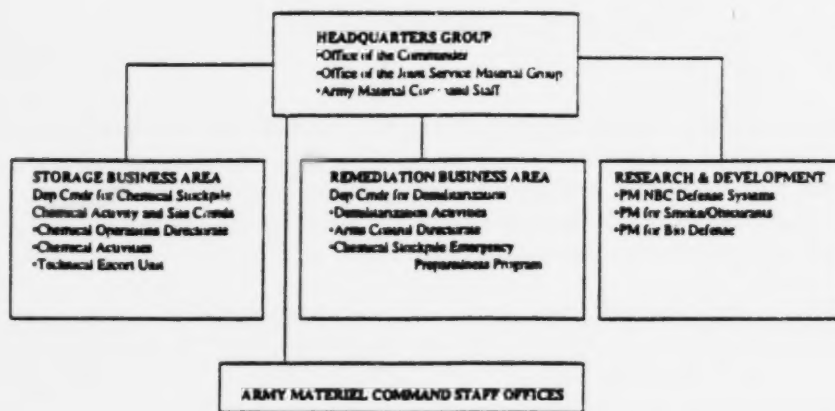
6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

See attached FY 96 CBDCOM Organizational Chart

7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See Part 2 (iii)

U.S. ARMY CHEMICAL AND BIOLOGICAL DEFENSE COMMAND
Aberdeen Proving Ground, Maryland USA



Form A, Part 2(ii)
National Biological Defence Research and Development Program

Defense Special Weapons Agency
Collateral Effects Program

II. Description

- 1. State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.**

The Defense Special Weapons Agency (DSWA) Weapons Effects Directorate's Collateral Effects Program is an effort to develop biological and chemical source forms for the DSWA Hazards Prediction and Assessment Capability (HPAC). The program's Expulsion Experiments examined the effects resulting from expulsion of biological or chemical simulants from a storage facility. In 1996, the Collateral Effects Program conducted both scaled and full-size field tests to examine downwind dispersion of biological simulants from a storage facility. The Collateral Effects Program used only simulants considered nonpathogenic and nontoxic to humans.

- 2. State the total funding for the program and its source.**

The (Fiscal Year) 1996 funding for the biological defense-related part of this program was approximately \$5,100,000.

- 3. Are aspects of this program conducted under contract with industry, academic institutions, or in other nondefense facilities:**

Yes. DSWA is the lead agency for this effort.

- 4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?**

Approximately 35% of the total DSWA Collateral Effects Program is expended on non-defense contracts.

- 5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.**

The Defense Special Weapons Agency (DSWA) Weapons Effects Directorate's Collateral Effects Program is an effort to develop chemical/biological hazard predication and assessment models, specifically validation of the Hazards Prediction and Assessment Capability (HPAC) model. Research areas of the program performed by contractors included:

- Measurement Sciences measures particle size of expelled biological surrogates during execution of field tests.
- Aerospace Corporation measures the volumetric amount of chemical transport in the field tests' plume and downwind cloud.
- Sumner Associates estimated the mass of the simulated agent expelled from the structure during the field tests.
- Applied Research Associates (ARA) measured the characteristics of the blast and fragmentation source and modeled expulsion plumes from target structures.
- Information Science Incorporated (ISI) studied early and late plume development with high speed photography.
- Logicon-RDA provided technical advice and data analysis.
- Denver Research Institute (DRI) conducted several scaled tests to study the effects of penetrating conventional weapons on underground biological or chemical storage facilities.

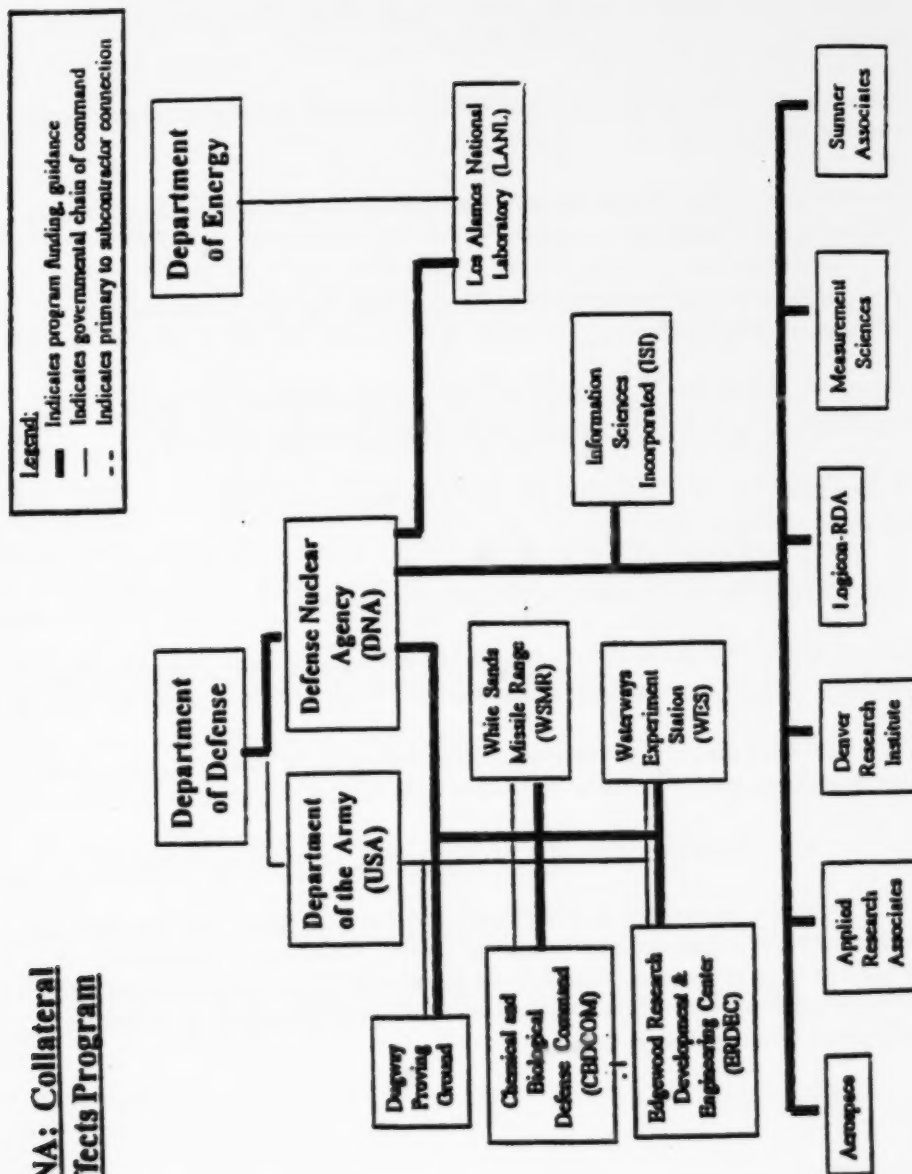
6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

A chart depicting the organizational structure of this program is attached.

7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See Part 2 (iii)

DNA: Collateral Effects Program



Form A, Part 2(ii)
National Biological Defence Research and Development Program

Defense Special Weapons Agency
Agent Neutralization Program

II. Description

1. **State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.**

The Defense Special Weapons Agency (DSWA) Weapons Effects Directorate's Agent Neutralization Program is an effort to provide a basic understanding concerning how chemical and biological weapons agents respond to weapons environments. The primary focus of work in 1996 was the response of biological agents to weapons-generated environments. The program provides data and models describing the neutralization of agents to thermal and reactive debris environments. The program used only biological surrogates considered nonpathogenic and nontoxic to humans.

2. **State the total funding for the program and its source.**

The FY 1996 budget for the biological threat aspects of this program was approximately \$750,000.

3. **Are aspects of this program conducted under contract with industry, academic institutions, or in other nondefense facilities:**

Yes.

4. **If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?**

Approximately 60% of the total funding for this program was spent on extramural contracts.

5. **Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.**

In 1996, the Agent Neutralization Program executed concurrent surrogate

investigations on both laboratory and full-scale levels. The Agent Neutralization contractor Battelle contributed to the program by accomplishing small scale thermal and reactive environment tests; providing Bt and Bg materials, containers and thermocouples used in the outdoor tests, and conducted biological viability analyses of samples from several tests.

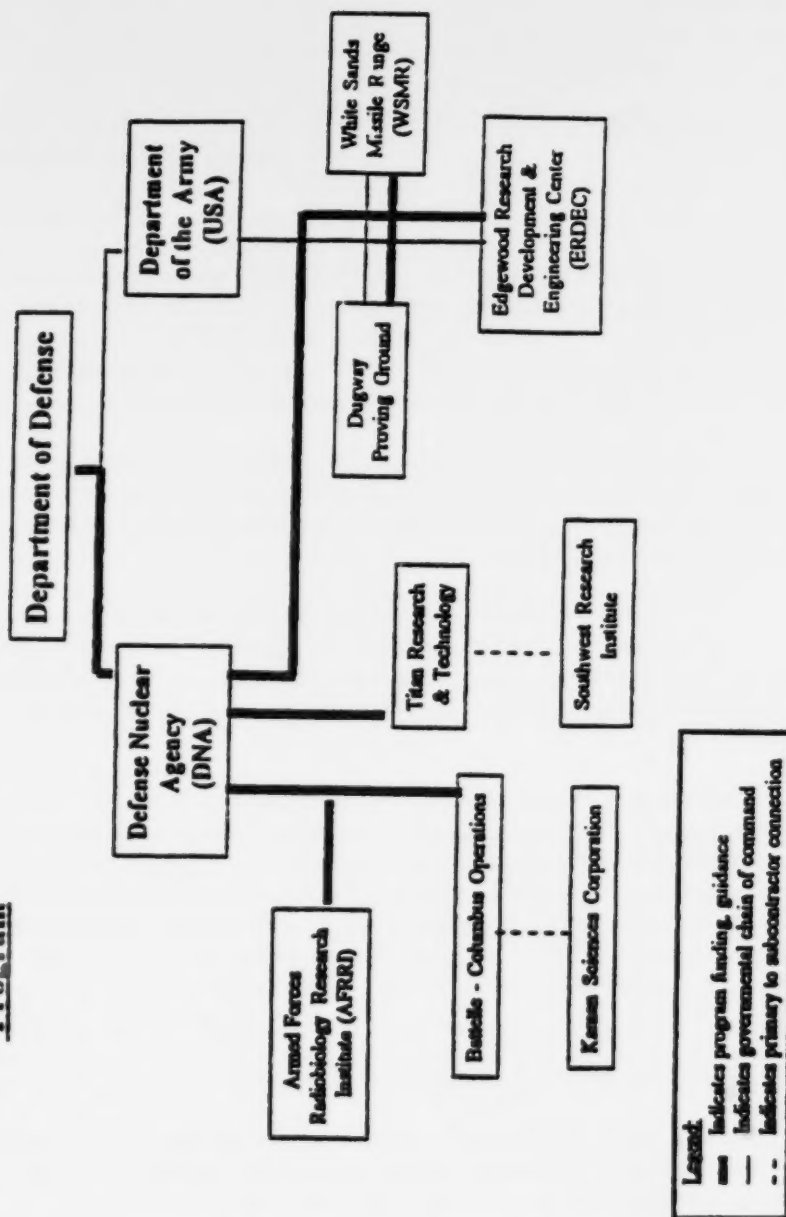
6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

A chart depicting the organizational structure for the DSWA Agent Neutralization program is attached.

7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

See Part 2 (iii)

DNA: Agent Neutralization Program



Form A, Part 2 (ii)
National Biological Defence Research and Development Program

The Ballistic Missile Defense Organization (BMDO)
Lethality and Target Hardening (LTH) Project
Theater Missile Defense (TMD) Lethality Program

II. Description

1. State the objectives and funding of the program and summarize the principle research and development activities conducted in the program. Areas to be addressed shall include: prophylaxis, studies on pathogenicity and virulence, diagnostic techniques, aerobiology, detection, treatment, toxicology, physical protection, decontamination and other related research.

The Ballistic Missile Defense Organization (BMDO) Lethality and Target Hardening (LTH) Project determines the effectiveness of various defensive concepts against threat missile systems. Potential threat missile systems include warheads carrying agents of biological origin (ABO).

The TMD Lethality Program develops the criteria for intercept of threat theater missiles to achieve specified levels of threat warhead negation. The program is defensive and does not develop offensive systems. The target hardening element of the program examines potential ways to harden the threat missiles against attack by defensive interceptors.

Analysis of earlier known or suspected warhead designs, intelligence estimates and engineering judgment were the basis for postulating the ABO threat warheads. Simulated threat warhead mechanicals were designed and fabricated as fixtures to represent the essential characteristics of the postulated threats only as related to the study of theater missile defense methods to counter or destroy said threat. The simulated threat warhead mechanicals employed in this program were not operational and no aspect of the program makes them either operational or flight worthy designs.

2. State the total funding for the program and its source.

There was no FY 1996 funding for the biological threat aspects of the program. The FY 1997 funding for the biological threat aspects of the program was \$120K to complete the bomblet aerothermal demise experiments, reported below.

3. Are aspects of this program conducted under contract with industry, academic institutions, or in other nondefense facilities:

Yes. Elements of this program have been conducted under contract with industry and academic institutions. While there was no funding of biological threat investigation in FY 1996, two corporate entities were involved in a long-term experiment to determine bomblet aerothermal demise, that was completed in February 1997. These two were Battelle Columbus Division (BCD) and General Research Corporation (GRC).

4. If yes, what proportion of the total funds for the program is expended in these contracted or other facilities?

As stated above, there was no FY 1996 funding for the biological threat aspects of the program. The FY 1997 funding for the biological threat aspects of the program was \$120K to complete the bomblet aerothermal demise experiments, as reported below. The entire amount, \$120K, was spent on a contract to the General Research Corporation.

5. Summarize the objectives and research areas of the program performed by contractors and in other facilities with the funds identified under para. 4.

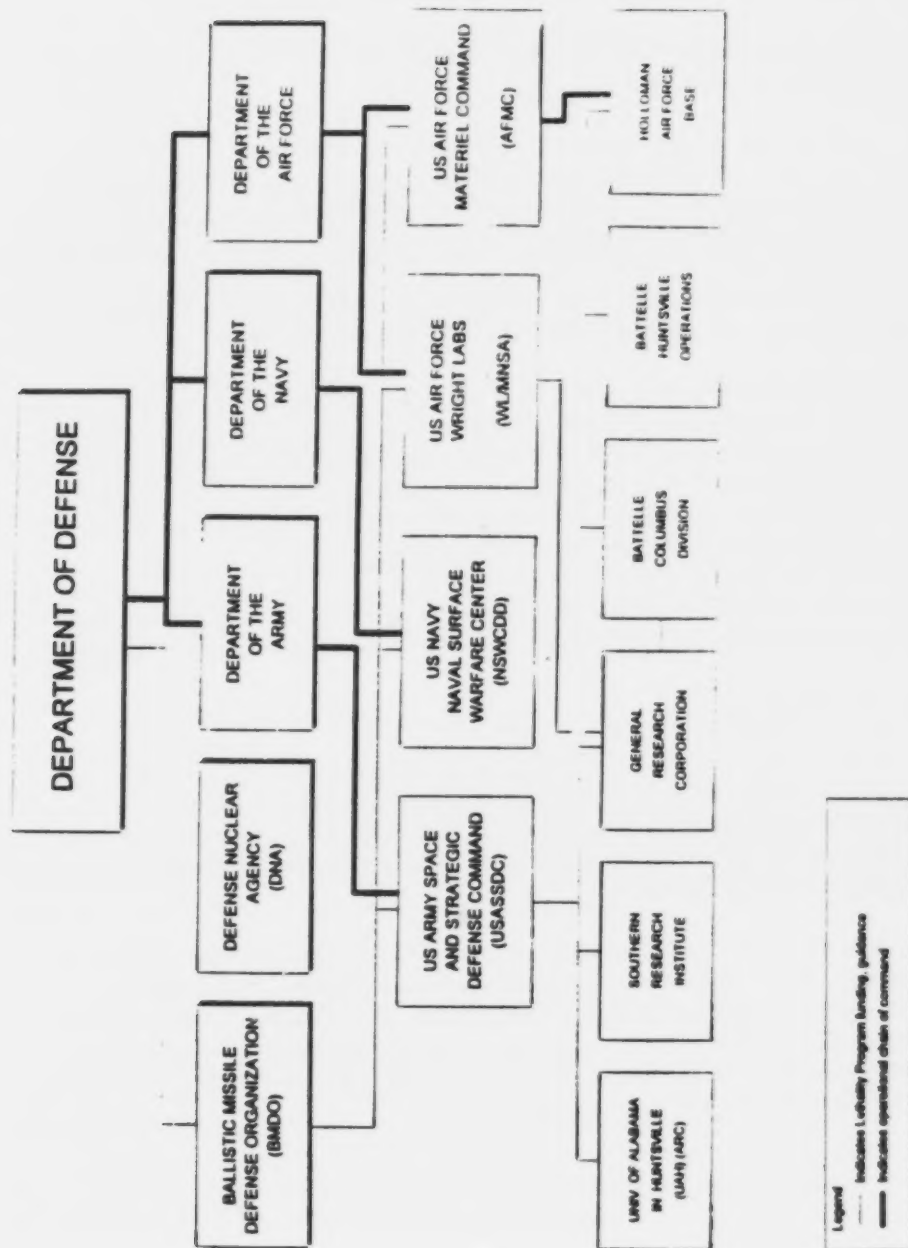
The General Research Corporation (GRC), Santa Barbara, California, acted as the integrator for the experiments. GRC developed the instrumentation for the bomblets, and the tubes for their deployment in the flight experiments. These items were then stored by GRC, as reported in the 1996 Declaration, and then were delivered by GRC to the test site for the two flight tests in February 1997. GRC performed no other biological threat investigation for the program during the reporting period.

6. Provide a diagram of the organizational structure of the program and the reporting relationships (include individual facilities participating in the program).

See attached diagram.

7. Provide a declaration in accordance with Form A: part 2 (iii) for each facility, both governmental and nongovernmental, which has a substantial proportion of its resources devoted to the national biological defense research and development program, within the territory of the reporting State, or under its jurisdiction or control anywhere.

There was no FY 1996 funding for biological threat negation efforts. Limited FY 1997 funding was provided to complete the bomblet aerothermal demise experiment. There was no investigation of biological threat agents, agent simulants, or threat warhead mechanical response during the reporting period, with the exception of the referenced bomblet aerothermal demise experiment. A Form A Part 2 (iii) data sheet is provided for GRC, which was funded during the reporting period.



ANNEX I

CONFIDENCE BUILDING MEASURE A

Part 2 (iii)

Exchange of Information on National Biological Defense

United States of America

April 1997

Form A, Part 2 (iii)
National Biological Defence Research and Development Program

III. Facilities

1. What is the name of the facility?

U.S. Army Medical Research Institute of Infectious Diseases

2. Where is it located?

Address: U.S. Army Medical Research Institute of Infectious Diseases
 1425 Porter St.
 Fort Detrick
 Frederick, MD 21702-5011

Geographical location: Central Maryland, 45 miles (73 km) northwest of Washington, D.C.

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	0
BL2 (sqM)	25,145
BL3 (sqM)	3,530
BL4 (sqM)	979
Total (sqM)	29,654

4. The organizational structure of each facility.

I. Total number of personnel 460

II. Division of personnel

Military	235
Civilian	225

III. Division of personnel by category

Scientist	116
Engineers	0
Technicians	113
Admin. and Support staff	231

IV. List the scientific disciplines represented in the scientific/engineering staff.

Infectious Disease Physician
Microbiology
Biochemistry
Chemistry
Clinical Immunology
Veterinary Medicine
Immunology
Genetics
Physiology
Internal Medicine Physician
Biology
Aerobiology
Endocrinology

V. Are contractor staff working in the facility?

Yes. Number: 35

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (entirely)

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1)	\$6,328,000
Development (6.2-6.3)	\$7,671,000
Advanced Development (6.4)	<u>\$ 410,000</u>
Total	\$14,409,000

VIII. Briefly describe the publication policy of the facility:

Publications are to be prepared in accordance with AR 360-5. (Army Regulations Manual - unclassified format manual).

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

Enclosures 1 (publications) and 2 (abstracts).

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

- a. Studies basic mechanism of action of classical biological agents, protein toxins, neuroactive compounds, and viral agents.
- b. Performs exploratory and advanced development of protective and therapeutic countermeasures.

II. Agents:

Coxiella burnetti
Bacillus anthracis
Yersinia pestis
Botulinum neurotoxins
Ricin
Staphylococcal enterotoxins
Marine toxins
Fungal toxins
Cholera toxin beta subunit
Clostridium perfringens toxins
Venezuelan equine encephalitis
Eastern equine encephalitis
Western equine encephalitis
Filoviruses
Vaccinia
Monkey, camel and cowpox viruses
Burkholderi pseudomallei (Glanders)
Brucella spp.

III. No outdoor biological defense aerosol studies are conducted at this facility.

Encl 1
USAMRIID, Publications
Form A 2 (iii) Question 4, IX

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INFECTIOUS DISEASE RESEARCH PROGRAM

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Encl 2

USAMRIID, Abstracts

Form A 2 (iii) Question 4, IX

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Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

U.S. Army Medical Research Institute of Chemical Defense

2. Where is it located?

Address: U.S. Army Medical Research Institute of Chemical Defense
3100 Ricketts Point Road
Aberdeen Proving Ground, MD 21010-5425

Geographical Location: Approximately 20 miles northeast of Baltimore,
MD

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	220
BL2 (sqM)	412
BL3 (sqM)	0
BL4 (sqM)	0
Total	632

4. The organizational structure of each facility.

I. Total number of personnel: 18

II. Division of personnel

Military:	3
Civilian:	15

III. Division of personnel by category

Scientists:	11
Engineers:	0
Technicians:	7
Admin. and Support Staff:	0

IV. List the scientific disciplines represented in the scientific/engineering staff

Veterinary medicine
Biology
Physiology
Pharmacology
Biochemistry
Pathology

V. Are contractor staff working in the facility?

Yes. Number: 11

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (entirely).

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1):	\$878,000
Development (6.2 & 6.3):	\$760,000
Advanced Development (6.4):	~~\$499,000~~
Total:	\$2,137,000

VIII. Briefly describe the publication policy of the facility:

Publications are to be prepared in accordance with AR 360-5 (Army Regulations Manual - unclassified format manual).

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

Enclosures 1 (publications) and 2 (presentations)

5. Briefly describe the biological defense work carried out at the facility, type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Since 1988, an element of the Institute's mission has involved the performance of basic research on medical defenses against neurotoxins. This work

concerns the pathophysiological mechanisms and effects of toxins of biological origin and proposed pharmacological pretreatment and/or therapeutic regimens. Neurotoxins of biological origin (botulinum toxin, saxitoxin, and tetrodotoxin) have been the primary targets of research interest. These studies have advanced our knowledge of the basic mechanisms of action of these toxins and of compounds that have been identified as having a potential for prophylaxis and therapy against them.

USAMRICD has not participated in medical biological defense development efforts that would involve the administration of candidate drugs or vaccines to human research subjects in clinical trials.

II. Agents:

Botulinum toxin
Saxitoxin
Tetrodotoxin

III. No outdoor biological defense aerosol studies are conducted at this facility.

Encl 1
USAMRICD Publications
Form A 2 (iii) Question 4, IX

U.S. Army Medical Research Institute of Chemical Defense Publications

Adler, Michael, Macdonald, Douglas A., Sellin, Lawrence C., and Parker, Gerald W. Effect of 3,4-diaminopyridine on rat extensor digitorum longus muscle paralyzed by local injection of botulinum neurotoxin. *Toxicon*, 34(2), 237-249, 1996.

Capacio, Benedict R., Byers, Christopher E., Matthews, Robin L., and Chang, Fat-Chun T. A method for determining 4-aminopyridine in plasma: pharmacokinetics in anaesthetized guinea pigs after intravenous administration. *Biomedical Chromatography*, 10, 11-116, 1996.

Chang, Fat-Chun T., Bauer, Robert M., Benton, Bernard J., Keller, Shannon A., and Capacio, Benedict R. 4-aminopyridine antagonizes saxitoxin- and tetrodotoxin-induced cardiorespiratory depression. *Toxicon*, 34(6), 671-690, 1996.

Sheridan, Robert E. Protonophore antagonism of botulinum toxin in mouse muscle. *Toxicon*, 34(8), 849-855, 1996.

Encl 2
USAMRICD Presentations
Form A 2 (i.) Question 4, IX

U.S. Army Medical Research Institute of Chemical Defense Presentations

Asermely, Karen E., Nowakowski, Janet, Courtney, Bernard C., and Adler, Michael. Measurement of a synaptobrevin-thioredoxin fusion protein by capillary zone electrophoresis using laser induced fluorescence detection. Eighth International Symposium on High Performance Capillary Electrophoresis, Orland, FL, 21-25 Jan 1996.

Sheridan, Robert E., and Deshpande, Sharad S. Structural features of aminoquinolines necessary for antagonism of botulinum intoxication. Experimental Biology '96, Washington, D.C., 14-17 Apr 1996.

Asermely, Karen E., Nowakowski, Janet, Courtney, Bernard C., and Adler, Michael. Measurement of a synaptobrevin-thioredoxin fusion protein (VAMP2 51aa-T) by capillary zone electrophoresis using laser induced fluorescence detection. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. II, 751-756, 1996.

Benton, Bernard J., Keller, Shannon A., Spriggs, D., Capacio, Benedict R., and Chang, Fat-Chun T. Recovery from the lethal effects of saxitoxin: a therapeutic window for 4-aminopyridine (4-AP). 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1442-1450, 1996.

Cann, Frank J., and Madren, A.E. Cytotoxicity of the zinc chelator, TPEN in NG108-15 Neuroblastoma cells as assessed with alamar blue. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1456-1464, 1996.

Capacio, Benedict R., Chang, Fat-Chun T., Spriggs, D., Byers, Christopher E., Matthews, Robin L., and Benton, Bernard J. Pharmacokinetics and electrophysiological effects of 4-aminopyridine in awake guinea pigs. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1466-1475, 1996.

Chang, Fat-Chun T., Benton, Bernard J., Bauer, Robert M., Spriggs, D., Keller, Shannon A., and Capacio, Benedict R. 4-aminopyridine antagonizes saxitoxin (STX) and Tetrodotoxin (TTX) induced lethality. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1424-1433, 1996.

Deshpande, Sharad S., Sheridan, Robert E., and Adler, Michael. Study of quinoline compounds as pharmacological antagonists in botulinum neurotoxin poisoning. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1506-1513, 1996.

Doebler, Jeffrey A., Dant, Beverly C., and Chang, Fat-Chun T. An in vitro screen using FURA-2 imaging to determine antidotal efficacy against saxitoxin and tetrodotoxin. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1514-1522, 1996.

Moore, Eric L., Carter, Damien J., and Kling, Cathleen E. Effects of saxitoxin and tetrodotoxin on brainstem auditory evoked potentials in the rat. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1556-1565, 1996.

Nicholson, James D., Sheridan, Robert E., and Adler, Michael. Novel metal binding site discovered in botulinum toxin target proteins. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996.

Sheridan, Robert E., and Deshpande, Sharad S. Structural features of aminoquinolines necessary for antagonist activity against botulinum neurotoxin. 1996 Medical Defense Bioscience Review, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1598-1604, 1996.

Starks, David, Kane, Charles T., Nicholson, James N., Hackley, Brennie E., Jr., and Adler, Michael. Analogs of phosphoramidon as metalloprotease inhibitors for botulinum toxin serotype B. 1996 Medical Research Institute of Chemical Defense, Baltimore, MD, 12-16 May 1996. Proceedings of the 1996 Medical Defense Bioscience Review, vol. III, 1608-1615, 1996.

Keller, S.A., Benton, Bernard J., Spriggs, D., Capacio, Benedict R., and Chang, Fat-Chun T. The therapeutic window of 4-aminopyridine (4-AP), an agent effective against the lethal effects of saxitoxin (STX). ASBMP, American Society for Investigative Pathology, New Orleans, LA, 02-06 Jun 1996.

Cann, Frank J., and Madren, A.E. Cytotoxicity of the zinc chelator TPEN in NG108-15 Neuroblastoma cells as assessed with Alamar Blue. Alternatives in the Assessment of Toxicity: Issues, Progress and Opportunities, ERDEC, APG, MD, 12-14 Jun 1996.

Asermely, Karen E., Nowakowski, Janet, Courtney, Bernard C., and Adler, Michael. Measurement of a synaptobrevin-thioredoxin fusion protein (VAMP_{II} 51aa-T) by capillary zone electrophoresis using laser induced fluorescence detection. International Conference on Biomedical Aspects of Clostridial Neurotoxins, Oxford, England, 07-11 Jul 1996.

Deshpande, Sharad S., Sheridan, Robert E., and Adler, Michael. Study of quinoline compounds as pharmacological antagonists in botulinum neurotoxin poisoning. International Conference on Biomedical Aspects of Clostridial Neurotoxins, Oxford, England, 07-11 Jul 1996.

Asermely, Karen E., Nowakowski, Janet, Courtney, Bernard C., and Adler, Michael. Measurement of a synaptobrevin-thioredoxin fusion protein (VAMP Π 51aa-T) by capillary zone electrophoresis using laser induced fluorescence detection. Seminar, National Institutes of Drugs of Abuse, Bethesda, Maryland, 07 Aug 1996.

Adler, Michael, Dinterman, R.E., and Wannemacher, R.W. Protection by the heavy metal chelator N,N,N',N'-tetrakis (2-pyridylmethyl) ethylenediamine against the lethal action of botulinum neurotoxin A and B. Interagency Botulism Research Coordinating Committee Meeting, Frederick, Md., 06-08 Nov 1996.

Moore, Eric L., Carter, Damien J., and Kling, Cathleen E. Effects of tetrodotoxin on auditory and visual evoked potentials in the rat. Society for Neuroscience, Washington, D.C., 16-21 Nov 1996.

Sheridan, Robert E. Characterization of ion channels produced by botulinum toxins in PC12 cells. Society for Neuroscience, Washington, D.C., 16-21 Nov 1996.

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

Walter Reed Army Institute of Research

2. Where is it located?

Address: Walter Reed Army Institute of Research
Washington, DC 20307-5100

Geographical Location: Northwest quadrant of the District of Columbia

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	0
BL2 (sqM)	1808.6
BL3 (sqM)	0
BL4 (sqM)	0
Total	1808.6

4. The organizational structure of each facility.

I. Total number of personnel: 60

II. Division of personnel:

Military:	21
Civilian:	39

III. Division of personnel by category

Scientists:	32
Engineers:	0
Technicians:	27
Admin. and Support Staff:	1

IV. List the scientific disciplines represented in the scientific/engineering staff.

Biochemistry
Biology

Chemistry
Experimental Psychology
Immunology
Infectious Disease
Medical Pathology
Microbiology
Pharmacology
Physiology
Veterinary Pathology

V. Are contractor staff working in the facility?

Yes. Number: 12

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (entirely).

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1):	\$2,131,000
Development (6.2 & 6.3):	\$1,724,000
Test and Evaluation (6.4 & 6.5):	\$0
Total:	\$3,855,000

VIII. Briefly describe the publication policy of the facility:

This laboratory supports and encourages scientists to publish and present their results in the open scientific literature and at scientific meetings. Technical papers receive in-house peer review before the article is submitted for publication. AR 360-5 gives guidance for the clearance of biological defense publications.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

- a. Analysis of intoxication and immune responses of toxins in animal models.
- b. Development of effective vaccines and prevention of intoxication of threat toxins.
- c. Rapid identification of intoxication in patients.
- d. Determine the biochemical mechanism of action for threat toxins.
- e. Determine host immunological recognition against *Francisella tularensis*.
- f. Provide information regarding likely physiologically active compound and the impact of these agents on soldier effectiveness.

II. Agents:

Staphylococcal enterotoxin B

Botulinum toxin

Ricin

Francisella tularensis

Physiologically Active Compounds

N-acetyl-aspartyl-glutamate (NAAG)

dynorphin A

corticotropin releasing hormone (CRH)

Gamma amino butyric acid (GABA)

vasopressin

thyrotropin releasing hormone (TRH)

phospholipase A2

cholinergic receptors and cross-talk with other receptors

adenosine analogs

various serotonin receptor subtype agonists and antagonists

antagonists of the N-methyl-D-aspartate glutamate receptor

III. No outdoor biological defense aerosol studies are conducted at this facility.

Enclosure

WRAIR, Publications

Form A 2 (iii) Question 4, IX

Cheville, N.F.; Olsen, S.C.; Jensen, A.E.; Stevens, M.G.; Florence, A.M.; Hough, H.S.; Drazek, E.S.; Warren, R.L.; Hadfield, T.L. & Hoover, D.L. (1996). Bacterial persistence and immunity in goats vaccinated with a pure deletion mutant or the parental 16M strain of *Brucella melitensis*. *Infect Immun*, 64(7), 2431-9.

Lindler, L.E.; Hadfield, T.L.; Tall, B.D.; Snellings, N.J.; Rubin, F.A.; Van De Verg, L.L.; Hoover, D.; & Warren, R.L. (1996). Cloning of a *Brucella melitensis* group 3 antigen gene

encoding Omp28, a protein recognized by the humoral immune response during human brucellosis. *Infect Immun*, 64(7), 2490-9.

Crawford, R.M.; Van De Verg, L.L.; Yuan, L.; Hadfield, T.L.; Warren, R.L.; Drazek, E.S.; Houng, H.H.; Hammack, C.; Sasala, K.; Polsinelli, T.; Thompson, J., & Hoover, D.L. (1996). Deletion of pure attenuates *Brucella melitensis* infection in mice. *Infect Immun*, 64(6), 2188-92.

Van De Verg, L.L.; Hartman, A.B.; Bhattacharjee, A.K.; Tall, B.D.; Yuan, L.; Sasala, K.; Hadfield, T.L.; Zollinger, W.D.; Hoover, D.L.; & Warren, R.L. (1996). Outer membrane protein of *Neisseria meningitidis* as a mucosal adjuvant for lipopolysaccharide of *Brucella melitensis* in mouse and guinea pig intranasal immunization models. *Infect Immun*, 64 (12), 5263-8.

Tortella, F.C.; Hill. EEG seizure activity and behavioral neurotoxicity produced by MK801, but not the glycine site antagonist L687,414 in the rat. *Neuropharmacology* 35: 441-448, 1996.

Koenig, M.L.; Yourick, D.L.; Meyerhoff, J.L.; Thyrotropin-releasing hormone (TRH) inhibits glutamate-stimulated increases in intraneuronal calcium. *Brain Research* 730: 143-149, 1996.

Yourick, D.L.; DeCoster, M.A. Acute and chronic effects of estrogenic compounds on glutamate stimulated phosphatidylinositol metabolism in primary neuronal cultures. *Neuroscience Letters* 206: 145-148, 1996.

Kant, G.J.; Meininger, G.R.; Maughan, K.R.; Robinson, T.N.; Wright, W.L.; Neely, T.N. Effects of the serotonergic agonists 8-OH-DPAT and TFMPP on learning and memory as assessed using a novel water maze. *Pharmacology, Biochemistry and Behavior* . 53: 385-390, 1996.

Kant, G.J.; Wylie, R.M.; Vasilakis, A.; Ghosh, S. Effects of triazolam and diazepam on learning and memory as assessed using a novel water maze. *Pharmacology, Biochemistry, and Behavior* 53: 317-322.

Lowell, G.H.; Colleton C.; Frost, D.; Kaminski, R.W.; Hughes, M.; Hatch, J.; Hooper, C.; Estep, J.; Pitt, L.; Topper, M.; Hunt, R.E.; Baker, W.; Baze, W.B. Immunogenicity and efficacy against lethal aerosol staphylococcal enterotoxin B challenge in monkeys by intramuscular and respiratory delivery of proteosome-toxoid vaccines. *Infect Immun*. 64: 4686-4693.

Hase, T.; Jett, M.; Asafo-Adjei, E.; topper M. Release of chromaffin granular content from staphylococcal enterotoxin B (SEB) - treated and -untreated PC12 cells. *In Vitro Cell Dev Biol Anim*. 32:322-328.

Neill, R.J.; Jett, M.; Crane, R.; Wootres, J.; Welch, C.; Hoover, D.; Gemski, P.; Mitogenic activities of amino acid substitution mutants of staphylococcal enterotoxin B in human and mouse lymphocyte cultures. *Infect Immun*. 64: 3007-3015.

Lowell, G.H.; Kaminski, R.W.; Grate, S.; Hunt, R.E.; Charney, C.; Zimmer, S.; Colleton, C.S.; Intranasal and intramuscular proteosome-staphylococcal enterotoxin (SEB) toxoid vaccines:

immunogenicity and efficacy against lethal SEB intoxication in mice. *Infect Immun.* 64: 1706-1713.

Hase, T.; Jett, M.; Asafoadjei, E.; Topper, M.; Release of chromaffin granular content from staphylococcal-enterotoxin-B (SEB)-treated and (SEB)-untreated pc12 cells. *In Vitro Cellular & Developmental Biology-Animal* 32: 322-328.

Matyas, G.R.; Alving, C.R. Protective prophylactic immunity against intranasal ricin challenge induced by liposomal ricin a subunit. *Vaccine Research.* 5:163-172.

Encl 2

WRAIR, Presentations

Form A 2 (iii) Question 4, IX

Bhattacharjee, A.; Gemski, P.; and M. Jett. 1996. Activities of staphylococcal enterotoxin B (SEB) conjugated with adipic acid dihydrazide. Abstracts 96th General Meeting of The American Society for Microbiology, New Orleans, LA, May 19-23, B-211, page 191.

Crawford, R.; Drazek, S.; Sassala, K.; Hadfield, T.; Warren, R.; & Hoover, D. (1996). Infection of human mononuclear phagocytes by *Brucella* sp. (Abstract). American Society of Microbiology 96th Annual Meeting, p. D89. New Orleans, Louisiana.

Eze, M.; Crawford, R.; Drabick, J.; Hadfield, T.; Warren, R.; & Hoover, D. (1996). Effects of serum opsonization on uptake and growth of *Brucella melitensis* 16M in mouse peritoneal macrophages (Abstract). In American Society of Microbiology 96th Annual Meeting, p. D88. New Orleans, Louisiana.

Matyas, G.R.; Alving, C.R. Protection against ricin by intranasal immunization with liposomes. *FASEB Journal* 10:1099 Meeting Abstract.

Yan, Z.; Gemski, P.; Neill, R.; Yang, D.C.H.; Jett, M. Differentiation of staphylococcal-enterotoxin B-induced TNF-alpha production and t-cell proliferation. *FASEB Journal* 10: Meeting Abstract.

Jett, M.; Welch, C.; McMorro, S.; Boyle, T.; Hoover, D.; Gemski, P. Inhibition of staphylococcal enterotoxin B (SEB)-stimulated mitogenicity in human T-cell cultures by blocking lipoxygenase, but not cyclooxygenase pathways. *Toxicon.* 34:295. Fifth Pan American Symposium on Animal, Plant, and Microbial Toxins, Frederick, Maryland, USA, July 30 - August 4, 1995.

TI- Boyle, T.; Jett, M.; Neill, R.; Gemski, P. Mutants of staphylococcal enterotoxin B showed reduced mitogenic activity in cultures of human lymphocytes. Abstracts of the General Meeting of the American Society for Microbiology. Abstract Pg 0 96.

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

Baker Test Facility, U.S. Army Dugway Proving Ground

2. Where is it located?

Address: U.S. Army Dugway Proving Ground
ATTN: STEDP-WD-L
Dugway, UT 84022-5000

Geographical Location: West-central region of Utah, approximately 65 miles southwest of Salt Lake City, UT

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	0
BL2 (sqM)	632.0
BL3 (sqM)	368.6
BL4 (sqM)	0
Total	1000.6

4. The organizational structure of each facility.

I. Total number of personnel: 25

II. Division of personnel:

Military:	0
Civilian:	25

III. Division of personnel by category

Scientists:	20
Engineers:	0
Technicians:	2
Admin. and Support Staff:	3

IV. List the scientific disciplines represented in the scientific/engineering staff.

Microbiology
Aerobiology
Toxicology
Biochemistry
Immunology
Veterinary Medicine

V. Are contractor staff working in the facility?

Yes. 5 personnel with approximately 4 work years in 1996.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (partly).

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1):	\$150,000 (non-DoD)
Development (6.2 & 6.3):	\$1,700,000 (DoD)
	\$47,000 (non-DoD)
Advanced Development (6.4):	\$0
Total:	\$1,897,000

VIII. Briefly describe the publication policy of the facility:

Baker Test Facility is a service organization providing test support to materiel developers. The majority of data produced in test reports are provided to the test sponsor. Work performed under test methodology development is published in open literature.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

See Enclosure - publications.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Dugway Proving Ground (DPG) acts as the independent testing organization for biological defense systems developed by the Department of Defense (DoD). DPG's Baker Test Facility is neither a production nor a research laboratory; it is a test and evaluation activity. The principal workload for the facility's staff is to test battlefield detection and identification methods, protective equipment, and decontamination systems. New biological defense equipment is tested to ensure it will provide the requisite levels of protection. The test results produced at DPG are also used to accurately establish equipment functional limits. To fully test and evaluate equipment and systems, the staff conducts methodology development, nonmedical assessment of suspected biological threat agents and their impact, and operational testing of biological defense systems.

The staff challenges defense materiel using pathogens and toxins inside biological containment facilities within Baker Test Facility. While harmless biological simulants are used in lieu of hazardous materials when feasible, test objectives cannot be met in all cases with simulants. Therefore, testing with pathogens and toxins is accomplished within the Baker Test Facility biological safety level 2/3 (BL-2/3) suites.

Outdoor testing with biological simulants is conducted to fully evaluate large pieces of biological defense equipment and systems, perform battlefield interferant testing of biological detectors and develop/validate aerosol particle dispersion models.

II. Agents:

Coxiella burnetii
Venezuelan equine encephalomyelitis (VEE)
Bacillus anthracis
Francisella tularensis
Yersinia pestis (strain EV76)
Staphylococcal enterotoxins
ricin
Mycobacterium
Brucella melitensis
Brucella suis
Brucella neotomae
Brucella abortus

Botulinum toxin

Simulants

Bacillus subtilis var.niger

Erwinia herbicola

MS2 (bacteriophage)

Ovalbumin

Bacillus thurengiensis

III. Outdoor biological defense aerosol studies using simulants are conducted at this facility.

Enclosure

U.S. Army Dugway Proving Ground, Publications
Form A 2 (iii) Question 4, IX

LIST OF PUBLICATIONS SINCE APRIL OF 1996

(Prepared in March of 1997)

1. Luo, SM and Mohr, A.J. Detailed Test Report for Chemical/Biological Mass Spectrometer (CBMS) Bioprofiling. TECOM Project No. 8-CO-410-000-022, Feb. 1997.
2. Bohannon, R.C., Martin D.D., Liebert, R.E., and Harper, B.G. Final Report: Methodology Investigation, Application of the Polymerase Chain Reaction Technology. DPG-MR-95-341. March, 1996.
3. Bohannon, R.C. Assessment of the Future Anti-Proliferation Needs for the U.S. Army, DPG, Concerning Field Testing of Detection Systems, Personnel and Facility Protection Devices, Facility Neutralization Protocols, and Decontamination SOPs for Chemical and Biologic Agents. Proposal provided to TECOM and Senator Orrin Hatch, 25 March, 1996.
4. Winters, D.R., Martin, D.D. Mohr, A.J., Luo, S.M., and Harper, B.G. The Use Ovalbumin as a Toxin Simulant. Proceedings of the Eighth International Simulant Workshop (ERDEC-SP-038). pp. 149-153. April 1996.
5. Wright, J.D., Bohannon, R.C., Liebert, R., Szarek, D., Roessler, J., Caldwell, M., Delgado, D., Harper, B., Long, B.J., and Conitz, C.C. Final Test Report for Preproduction Qualification Test (PPQT) of the Biological Integrated Detection System (BIDS), DPG-TR-95-214. May, 1996.
6. Lowell R.E., Rome, W.J., and Peart, S.D.C. Nuclear, Biological, and Chemical (NBC) Survivability Analysis of the Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T). September, 1996. (Classified)
7. Patents submitted to U.S. Army Materiel Command Simultaneous Detection of Multiple Nucleic Acid Sequences; Detection of Multiple Antigens or Antibodies; and Method to Detect Multiple Antigens and Nucleic Acids Simultaneously.. October, 1996.
8. Luo, S.M, Mohr, A.J., and Farrow, S.W. Abbreviated Test Report for the Production Prove-out Test for Biological Integrated Detector System (BIDS) Pre-Planned Product Improvement (P³I), Chemical Biological Mass Spectrometer (CBMS). TECOM Project No. 8-CO-410-000-043, October, 1996.
9. Bohannon, R.C. PCR vs. ORIGEN7 Detection of Autoclaved Anthrax. Scientific Conference on Chemical and Biological Defense Research, Edgewood Research, Development & Engineering Center, Aberdeen Proving Ground, MD. 1996.

10. Slater, J.R., Weatherhead, D.C. Jr., and Rome, W.J. Jr. Abbreviated Test Report for the Nuclear, Biological, and Chemical (NBC) Contamination Survivability of the PA103 and PA103E1 (A1) Ammunition Containers. DPG-FR-95-335. 1996.
11. Lowell, R.E. and Rome, W.J. Abbreviated Test Report for the NBC Contamination Survivability Assessment (NBCCSA) of the Hand-Emplaced Wide Area Munition (HE-WAM) Packaging Container, PA160. DPG-TR-96-004. 1996.
12. Lowell, R.E. and Rome, W.J. Abbreviated Test Report for the NBC Contamination Survivability Assessment (NBCCSA) of the PAM/TCW 2A (CNU-553/E) and Stinger (PA158) Ammunition Containers. DPG-TR-96-032. 1996.
13. Marshall, M.S., Andersen, D.O., and Peart, S.D.C. Data Report for the Limited User Test (LUT) of the Nondevelopmental Item (NDI) -94 Long Range Biological Standoff Detection System (LR-BSDS). DPG-DR-96-045. 1996.
14. Setser, B.G., Anderson, F.L.S., Andersen, D.O., and Mohr, A.J. Data Report for JFT Follow-On Chamber Test. DPG-DR-96-042. 1996.
15. Andersen, F.L.S. and Mohr, A.J. Abbreviated Test Report for Airbase/Port Biological Advanced Concept Technical Demonstration. DPG-TR-96-054. 1996.
16. Andersen, D.O. and Mohr, A.J. Abbreviated Test Report for Outdoor Field Trial (Joint Field Trial III (JFT III) of Prototype Biological Detection Components and Systems. DPG-TR-97-011. 1997.
17. Mohr, A.J. Fate and Transport of Microorganisms in Air. *In* Manual of Environmental Microbiology. Eds. Hurst, C.J. et al. American Society for Microbiology, Washington, D.C. pp. 641-650. 1997.
18. Warner, P. J. Roberts, C. E. Jr; Rome, W. J., Weatherhead, D. C. Jr. Nuclear, Biological and Chemical (NBC) Survivability Test in Support of the Preplanned Product Improvement (P to the third power I) of the M40-Series CB Protective Mask Components. ACCN 552587. August, 1996.
19. U.S. Army Dugway Proving Ground. Annex X: Biological Emergency Response and Assistance Plan (BERAP) to the U.S. Army Dugway Proving Ground Disaster Control Plan (DPG-DCP). ACCN 552922. July, 1996.
20. Slater, J. R. Weatherhead, D. C., Jr; Rome, W. J. Jr. Abbreviated Test Report for the Nuclear, Biological, and Chemical (NBC) contamination Survivability of the M2A1 Ammunition Container. DPG-FR-95-343. July, 1996
21. Mohr, A. J., Luo, S., and Farrow, S. Abbreviated Test Report for the Production Prove-Out Test (PPT) for Biological Integrated Detector System (BIDS) Pre-Planned Product

Improvement (P3I) Chemical/Biological Mass Spectrometer (CBMS). DPG-FR-96-05.
September, 1996.

ENVIRONMENTAL DOCUMENTS FOR APRIL 96 TO MARCH 97

1. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Polymerase Chain Reaction (PCR) Technology Development. TECOM Project No. 7-CO-M96-DPD-006. 15 April 1996.
2. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Construction of Sampling Kits for Biological Agents. 17 April 1996.
3. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Outdoor Field Trial [Joint Field Trial II (JFT II)] Follow On Test (FOT) of Prototype Biological Detection Components and Systems. TECOM Project No. 8-CO-410-000-042. 22 April 1996.
4. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Large Area Decontamination of Biological Agents, Effectiveness of Bleach in killing *Bacillus subtilis* var. *niger* - A Laboratory Test. TECOM Project No. 24 April 1996.
5. U.S. Army Dugway Proving Ground, Utah. Modification of Record of Environmental Consideration (REC) for Laser Standoff Chemical Detection 1995 testing. TECOM Project No. 8-ES-685-AIL-003. 24 April 1996.
6. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Production Proveout Test (PPT) for Biological Integrated Detector System (BIDS) Pre-Planned Production Improvement (P3I) Biological Detector (BD). TECOM Project No. 8-CO-410-000-035. 25 April 1996.
7. U.S. Army Dugway Proving Ground, Utah. Modification of Record of Environmental Consideration (REC) for Large Area Decontamination of Biological Agents, Effectiveness of Bleach in killing *Bacillus subtilis* var *niger* - A Laboratory Test. 25 April 1996.
8. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Nuclear, Biological, Chemical Compliance Testing of the Tub-Launched, Optically Tracked, Wire-guided (TOW) missile Improved Target Acquisition System (ITAS). TECOM Project No. 2-MI-080-TOW-039. 29 April 1996.
9. U.S. Army Dugway Proving Ground, Utah. Memorandum for WD-L-T (Dr. Bohannon) for Modification of REC for the PCR Technology Development Project. 6 May 1996.

10. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Airbase/Port Biological Advanced Concept Technical Demonstration (ACTD). TECOM Project No. 8-CO-210-000-058. 13 May 1996.

11. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Road Enhancement for Joint Field Trials III of the Biological Integrated Detection System. 6 June 1996.

12. U.S. Army Dugway Proving Ground, Utah. Memorandum for WD-L-T (Dr. Wright) for Amendment of REC for Biological Detector (BD) PPT Tests with the Biological Integrated Detection System (BIDS). 11 June 1996.

13. U.S. Army Dugway Proving Ground, Utah. Memorandum for WD-L-T (Dr. Mohr) for Modification of Record of Environmental Consideration (REC) for PPT for the Airbase/Port Biological Advanced Concept Technical Demonstration (ACTD) TECOM Project No. 8-CO-210-000-058. 28 June 1996

14. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Water Support in a Toxic Environment, Phase I Testing. TECOM Project No. 8-CO-210-049-260. 24 July 1996.

15. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Outdoor Field Trial [Joint Field Trial (JFT III)] of Prototype Biological Detection Components and Systems, TECOM Project No. 8-CO-410-000-040. 6 August 1996.

16. U.S. Army Dugway Proving Ground, Utah. Memorandum for WD-L-T (Dr. Wright) for Modification of Record of Environmental Consideration (REC) for PPT for Biological Integrated Detector System (BIDS) Pre-Planned Production Improvement (P3I) Biological Detector (BD). 26 Aug 1996.

17. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Joint Field Trials III (JFT III) Laboratory Test of Prototype Biological Detection Components and Systems. TECOM Project No. 8-CO-410-000-040. 17 September 1996.

18. U.S. Army Dugway Proving Ground, Utah. Record of Environmental Consideration (REC) for Removal of Biological Contamination by Military Water Purification Equipment. TECOM Project No. 8-ES-225-PWP-001. 23 September 1996.

19. U.S. Army Dugway Proving Ground, Utah. Memorandum for WD-L-T (Dr. Mohr) for Modification of Record of Environmental Consideration (REC) for PPT for 12th Airbase/Port Advanced Concept Technical Demonstration (ACTD). TECOM Project No. 8-CO-210-000-058. 25 September 1996.

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

U.S. Army Edgewood Research, Development and Engineering Center (ERDEC)

2. Where is it located?

Address: Technical Director
U.S. Army Edgewood Research, Development and
Engineering Center
SCBRD-TD
Aberdeen Proving Ground, MD 21010-5423

Geographical location: Northeastern Maryland

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	736
BL2 (sqM)	452
BL3 (sqM)	0
BL4 (sqM)	0
Total (sqM)	1188 sqM

4. The organizational structure of each facility.

I. Total number of personnel 230

II. Division of personnel

Military	6
Civilian	224

III. Division of personnel by category

Scientist	74
Engineers	68
Technicians	28
Admin. and Support staff	60

IV. List the scientific disciplines represented in the scientific/engineering staff.

- Aerospace Engineering
- Bio Science
- Biology
- Biochemistry
- Chemical Engineering
- Chemistry
- Computer Program Analysis
- Computer Science
- Electronic Engineering
- General Engineering
- Mathematics
- Mechanical Engineering
- Meteorology
- Microbiology
- Operations Research Analysis
- Physics
- Statistics
- Toxicology

V. Are contractor staff working in the facility?

Yes, approximately 36.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (entirely)

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research	\$25,100,000
Development	\$68,200,000
Testing and Evaluation	\$4,000,000
Industrial Preparedness	0
Total	\$97,300,000

VIII. Briefly describe the publication policy of the facility:

ERDEC publishes as much research and development work on biodefense as possible in a form readily available to the general public and sponsors the presentation of much of the work at national and international scientific meetings and conferences. In addition, portions of the developmental work are published in an open forum as well. Exceptions to this policy are made for information such as: test results on proprietary items submitted to ERDEC for comparative evaluation, information obtained from other governments which they do not want placed in a public forum, information on technologies deemed to be critical to the national defense, information which would be useful for a terrorist or aggressor in conducting an attack against the U.S. or its citizens and administrative information on program planning and execution which would give unfair advantage to one potential contractor over another in any project competitive solicitations.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.**Reports and Publications:**

SP-036 Proceedings of the 1994 ERDEC Scientific Conference on
Chemical and Biological Defense Research, 15-18
November 1994
May, 1996
UNCLASSIFIED - public release
D. Berg, P.J. Reeves
R&T

SP-043 Proceedings of the 1995 ERDEC Scientific Conference and
Biological Defense Research 14-17 Nov 1995
July, 1996
UNCLASSIFIED - public release
D. Berg
R&T

Journal Articles:

1. FLUORESCENCE PARTICLE COUNTER FOR DETECTING AIRBORNE
BACTERIA AND OTHER BIOLOGICAL PARTICLES
Author(s): PINNICK RG; HILL SC; NACHMAN P; PENDLETON JD; FERNANDEZ
GL; MAYO MW; BRUNO JG
Journal: AEROSOL SCIENCE AND TECHNOLOGY, 1995, V23, N4 (NOV), P653-664
Document Type: ARTICLE (Abstract Available)

2. A COLOR IMAGE-ANALYSIS METHOD FOR ASSESSMENT OF GERMINATION BASED ON DIFFERENTIAL FLUORESCENCE STAINING OF BACTERIAL-SPORES AND VEGETATIVE CELLS USING ACRIDINE-ORANGE

Author(s): BRUNO JG; MAYO MW

Journal: BIOTECHNIC & HISTOCHEMISTRY, 1995, V70, N4 (JUL), P175-184

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

3. MEASURING DIAMETERS OF ROD-SHAPED BACTERIA IN-VIVO WITH POLARIZED-LIGHT SCATTERING

Author(s): BRONK BV; DRUGER SD; CZEGE J; VANDEMERWE WP

Journal: BIOPHYSICAL JOURNAL, 1995, V69, N3 (SEP), P1170-1177

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

4. AEROSOL-FLUORESCENCE SPECTRUM ANALYZER - REAL-TIME MEASUREMENT OF EMISSION-SPECTRA OF AIRBORNE BIOLOGICAL PARTICLES

Author(s): HILL SC; PINNICK RG; NACHMAN P; CHEN G; CHANG RK; MAYO MW; FERNANDEZ GL

Journal: APPLIED OPTICS, 1995, V34, N30 (OCT 20), P7149-7155

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

5. 14508681 Genuine Article#: TT690 No. References: 33

Title: IMMUNOMAGNETIC-ELECTROCHEMILUMINESCENT DETECTION OF ESCHERICHIA-COLI O157 AND SALMONELLA-TYPHIMURIUM IN FOODS AND ENVIRONMENTAL WATER SAMPLES

Author(s): YU H; BRUNO JG

Journal: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 1996, V62, N2 (FEB), P587-592

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

6. Emanuel, Peter and Valdes, James. DIRECTING ANTIGEN SPECIFICITY TOWARDS BOTULINUM NEUROTOXIN AND ASSOCIATED NON-NEUROTOXIN PROTEINS WITH COMBINATORIAL PHAGE DISPLAY LIBRARIES. *Journal of Immunological Methods*, March 1996.

7. 14784908 Genuine Article#: UL575 No. References: 25

Title: HIGHLY SELECTIVE ACRIDINE AND ETHIDIUM STAINING OF BACTERIAL-DNA AND RNA

Author(s): BRUNO JG; SINCOCK SA; STOPA PJ

Corporate Source: APPL RES ASSOCIATES, ARMSTRONG LAB, ENVIRON DIRECTORATE, 139 BARNES DR, SUITE 2, BLDG 1117/TYNDALL AFB//FL/32403; SCI & TECHNOL CORP/EDGEWOOD//MD/21040; USA, EDGEWOOD RES DEV & ENGN CTR, SCBRD, RTE/ABERDEEN PROVING GROUND//MD/21010

Journal: BIOTECHNIC & HISTOCHEMISTRY, 1996, V71, N3 (MAY), P130-136

ISSN: 1052-0295

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

8. 14749598 Genuine Article#: UJ228 No. References: 32

Title: CLONING AND EXPRESSION OF A GENE ENCODING A BACTERIAL ENZYME DECONTAMINATION OF ORGANOPHOSPHORUS NERVE AGENTS AND NUCLEOTIDE-SEQUENCE OF THE ENZYME

Author(s): CHENG TC; HARVEY SP; CHEN GL

Corporate Source: USA,EDGEWOOD RES,CTR DEV & ENGN,RES & TECHNOL DIRECTORATE/ABERDEEN PROVING GROUND//MD/21010; KENNEDY KRIEGER INST/BALTIMORE//MD/21005

Journal: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 1996, V62, N5 (MAY), P1636-1641

ISSN: 0099-2240

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

9. Title: IMMUNOMAGNETIC-ELECTROCHEMILUMINESCENT DETECTION OF BACILLUS-ANTHRACIS SPORES IN SOIL MATRICES

Author(s): BRUNO JG; YU H

Corporate Source: USAF,ARMSTRONG LAB,ENVIRON DIRECTORATE,139 BARNES DR,STE 2/TYNDALL AFB//FL/32403; USA,EDGEWOOD RES DEV & ENGN CTR,SYST RES LABS/ABERDEEN PROVING GROUND//MD/21010

Journal: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 1996, V62, N9 (SEP), P3474-3476

ISSN: 0099-2240

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

10. 14993996 Genuine Article#: VB391 No. References: 16

Title: BIOREACTOR STRATEGIES FOR THE TREATMENT OF GROWTH-INHIBITORY WASTE - AN ANALYSIS OF THIODIGLYCOL DEGRADATION, THE MAIN HYDROLYSIS PRODUCT OF SULFUR MUSTARD

Author(s): LEE T; PHAM MQ; WEIGAND WA; HARVEY SP; BENTLEY WE

Corporate Source: UNIV MARYLAND,INST BIOTECHNOL,CTR AGR BIOTECHNOL/COLLEGE PK//MD/20742; UNIV MARYLAND,INST BIOTECHNOL,CTR AGR BIOTECHNOL/COLLEGE PK//MD/20742; UNIV MARYLAND,DEPT CHEM ENGN/COLLEGE PK//MD/20742; USA,EDGEWOOD RES DEV & ENGN CTR/ABERDEEN PROVING GROUND//MD/21010

Journal: BIOTECHNOLOGY PROGRESS, 1996, V12, N4 (JUL-AUG), P533-539

ISSN: 8756-7938

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

11. 14902261 Genuine Article#: UV325 No. References: 34

Title: DIRECTING ANTIGEN-SPECIFICITY TOWARDS BOTULINUM NEUROTOXIN WITH COMBINATORIAL PHAGE DISPLAY LIBRARIES

Author(s): EMANUEL P; OBRIEN T; BURANS J; DASGUPTA BR; VALDES JJ;
ELDEFRAWIM

Corporate Source: ERDEC,SCBRD,RT,BLDG E3549,ROOM C-204, EDGEWOOD
AREA/ABERDEEN PROVING GROUND//MD/21010; UNIV MARYLAND,SCH
MED,DEPT PHARMACOL & EXPTL THERAPEUT/BALTIMORE//MD/21201;
USA.RES DEV & ENGN

CTR.RES & TECHNOL DIRECTORATE/ABERDEEN PROVING
GROUND//MD/21010; USN,MED RES INST/BETHESDA//MD/20889; UNIV
WISCONSIN,DEPT FOOD MICROBIOL & TOXICOL/MADISON//WI/53706

Journal: JOURNAL OF IMMUNOLOGICAL METHODS, 1996, V193, N2 (JUN 21),
P189-197

ISSN: 0022-1759

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

12. 14893750 Genuine Article#: UU978 No. References: 13

Title: ENHANCING IMMUNOELECTROCHEMILUMINESCENCE (IECL) FOR
SENSITIVE BACTERIAL DETECTION

Author(s): YU H

Corporate Source: USAF,AL,CALSPAN SRL CORP,EDGEWOOD RES DEV & ENGN
CTR,BLDG E3549/ABERDEEN PROVING GROUND//MD/21010

Journal: JOURNAL OF IMMUNOLOGICAL METHODS, 1996, V192, N1-2 (JUN 10),
P63-71

ISSN: 0022-1759

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

13. 14886311 Genuine Article#: UU402 No. References: 16

Title: DETECTION OF PATHOGENIC AND NONPATHOGENIC BACTERIA BY
MATRIX-ASSISTED LASER DESORPTION/IONIZATION TIME-OF-FLIGHT
MASS-SPECTROMETRY

Author(s): KRISHNAMURTHY T; ROSS PL; RAJAMANI U

Corporate Source: USA,EDGEWOOD RD&E CTR/ABERDEEN PROVING
GROUND//MD/21010

Journal: RAPID COMMUNICATIONS IN MASS SPECTROMETRY, 1996, V10, N8,
P883-888

ISSN: 0951-4198

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14. 14847306 Genuine Article#: UQ542 No. References: 14

Title: A CLONED BACTERIAL ENZYME FOR NERVE AGENT
DECONTAMINATION

Author(s): CHENG TC; CALOMIRIS JJ

Corporate Source: USA,EDGEWOOD RES DEV & ENGN CTR/ABERDEEN
PROVING GROUND//MD/21010

Journal: ENZYME AND MICROBIAL TECHNOLOGY, 1996, V18, N8 (JUN),
P597-601

ISSN: 0141-0229

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Conferences:

1. Scientific Conference on Obscuration and Aerosol Research
Dates: 23-27 June 1997,
POC: Dr. E. Stuebing
Main Subject: Aerosol research, obscuring aerosol and its effects
Timeframe of conference: 3 days
Conditions for participation: Invitations sent to interested individuals
2. Joint Services Workshop on Next Generation Biological Mass Spectrometry
Dates: 28-30 July 1997
POC: Dr. R. Long
Main Subject: Mass spectrometry of biological materials
Timeframe of conference: 3 days
Conditions for participation: Invitations sent to select individuals
3. Scientific Conference on Chemical & Biological Defense Research
Dates: 18-21 November 1997
POC: Ms. D. Berg
Main Subject: chemical and biological defense research
Timeframe of conference: 4 days
Conditions for participation: Invitations sent to interested individuals
5. **Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**

I. Objectives:

ERDEC's Biological Defense Program supports the development of nonmedical defensive materiel against biological agents. Research, development and engineering efforts are ongoing at ERDEC for methods of rapid detection, identification, decontamination and physical protection off/from biological threat agents. Specific objectives for FY 96 included investigation of UV fluorescence of biologicals; mass spectrometric sampling techniques for large molecules; antibody development; aerobiology; DNA probe generation; light scattering by aerosol particles; and prediction modeling. These efforts will significantly enhance our capability to detect, warn and protect against biological threats. Biotechnology efforts which use biological materials are concentrated in the Process Engineering Facility's (PEF) cell culture and fermentation laboratory.

The work is focused on Hybridoma cell lines for the manufacture of monoclonal antibodies. During FY 96, the PEF had one murine hybridoma cell line producing monoclonal antibodies.

II. Agents

Bacillus anthracis non-pathogenic strain

Botuillum toxin subtype B/also toxoid type B

Cholera toxin type B

VEE virus gamma irradiated

E. coli JM109, XL1-Blue, DH5alpha, and ER2537 these are live strains (BL-1)

VSCM13 helper bacteriophage and ExAssist bacteriophage (no hazard associated with these viruses)

III. Outdoor Studies

None

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

Armed Forces Institute of Pathology

2. Where is it located?

Address: Armed Forces Institute of Pathology
6825 16th St, N.W.
Bldg 54, CPS-M
Washington D.C. 20306-6000

Geographical location: North Central Washington D.C., Alaska Avenue and 14th Street

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	0
BL2 (sqM)	60.4
BL3 (sqM)	173.2
BL4 (sqM)	0
Total	233.6 sqM

4. The organizational structure of each facility.

I. Total number of personnel 9

II. Division of personnel

Military	4
Civilian	5

III. Division of personnel by category

Scientist	3
Engineers	0
Technicians	5
Admin. and Support staff	1

IV. List the scientific disciplines represented in the scientific/engineering staff.

Microbiology
Immunology

V. Are contractor staff working in the facility?

Yes. Number: 4

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (substantial)

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1)	\$475,000
Development (6.2-6.3)	\$ 0
Advanced Development (6.4)	<u>\$ 0</u>
Total	\$475,000

VIII. Briefly describe the publication policy of the facility:

Publications are to be prepared in accordance with AR 360-5. (Army Regulations Manual - unclassified format manual).

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

See enclosures 1-3 below.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

a. Culture of organisms for extraction of lipopolysaccharide, proteins, DNA for immunologic and molecular biology studies to generate component vaccine products, to define important proteins in immune responses, define proteins for rapid identification, define biomarkers for use in rapid detection, and animal studies to evaluate efficacy of component and live bacterial vaccine candidates.

b. Provide collaborative facilities with killed suspensions of bacterial agents for BD research conducted off site.

II. Agents:

Brucella melitensis
Brucella abortus
Brucella suis
Francisella tularensis
Vibrio cholera

III. No outdoor biological defense aerosol studies are conducted at this facility.

Encl 1

AFIP, Publications

Form A 2 (iii) Question 4, IX

Beverly MB, Basile F, Voorhees KJ, Hadfield TL. A rapid approach for detection of dipicolinic acid in bacterial spores using pyrolysis/mass spectrometry. *Rapid Communications in Mass Spectrometry* 1996;10:455-458

Olsen SC, Cheville NF, Stevens MG, Hough HH, Drazek ES, Hadfield TL, Warren RL, Hoover DL. Lymphocyte proliferative responses of goats vaccinated with *Brucella melitensis* strain 16M or delta pur E201. *Infection and Immunity* 1996

Encl 2

AFIP, Presentations

Form A 2 (iii) Question 4, IX

Hadfield TL, Hilyard EJ, Evans BE, Basila F, Voorhees K, Sickenberger D. Identification of Bacteria Fatty Acids using GC and Py MS. *Biologie in Technik und Umwelt*. 22-24 Jan 1996. Mannheim, Germany at Bundesakademie fur Wehrverwaltung und Wehrtechnik Internationales Wehrtechnisches Symposium.

Hadfield TL. Future applications of the CBMS in Biodefense. 14-16 Feb 1996. CBMS Users Group. Colorado State University of Mines, Golden, CO.

Hadfield TL. In Situ methylation of Fatty Acids during pyrolysis. 21 Feb 1996. AFIP Staff Conference. Washington D.C.

Crawford, R., Drazek S, Sasala K, Hadfield TL, Warren R, Hoover D. Infection of human phagocytes by *Brucella* spp. *ASM* (abstract #D-89)

Eze M, Crawford R, Drabick J, Hadfield TL, Bhattacharjee A, Warren R, Hoover D. Effects of serum opsonization on uptake and growth of *Brucella melitensis* 16M in mouse peritoneal macrophages. ASM (abstract #D88)

Kelly K, Hadfield TL, Fox K, Fox A. Differentiation of *Brucella* species using PCR and gas chromatography-mass spectroscopy. ASM (abstract #R-15)

Hadfield TL. Emergency response procedures for Biosafety level-3 laboratories incidents by the Fire Department Personnel. July 2 and 9, 1996. 40 fire fighters.

Hadfield TL. Brucellosis. USU Tropical Medicine Course, July 24, 1996 ~ 100 participants.

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

U.S. Army Engineer Waterways Experiment Station (WES)

2. Where is it located?

Address: 3903 Halls Ferry Road
 Vicksburg, MS 39180

Geographical Location: Vicksburg is located on the Mississippi River in the west-central region of the state of Mississippi.

*NOTE: Other research programs unrelated to biological warfare defense are conducted this facility. The following data is for Collateral Effects Program efforts performed at WES.

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	N/A
BL2 (sqM)	N/A
BL3 (sqM)	N/A
BL4 (sqM)	N/A
Total	N/A

4. The organizational structure of each facility. [The following personnel are/are not dedicated to the biological component of this effort; a majority of their time is spent on other activities.]

I. Total number of personnel: 5

II. Division of personnel:

Military:	0
Civilian:	5

III. Division of personnel by category:

Scientists:	0
Engineers:	2

Technicians:	3
Admin. and Support Staff:	0

IV. List the scientific disciplines represented in the scientific/engineering staff

Civil Engineering
Mechanical Engineering

V. Are contractor staff working in the facility?

Yes. Number: 5 (work on-site approximately one month of the year)

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (partly).

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1):	\$0
Development (6.2 & 6.3):	\$0
Advanced Development (6.4):	\$1,250,000
Target Production:	<u>\$0</u>
Total:	\$1,250,000*

*Approximately 50% (\$625,000) of total allocated for contractor support

VIII. Briefly describe the publication policy of the facility:

The results of all technical programs are documented in technical reports for official government use only.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**I. Objectives:**

Study the collateral effects of penetrating conventional weapons on underground and bermed aboveground biological or chemical model storage facilities.

II. Agents: Tracers include:

Chemical simulants:
Triethyl Phosphate (TEP)

III. Outdoor Studies:

Tests were conducted to study the effects of penetrating weapons on containers of simulated agent and the resulting expulsion plumes. The studies obtained video data on the plume geometries, and the properties of the expulsion jet and plume.

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

Naval Medical Research Institute, Biological Defense Research Program (BDRP)

2. Where is it located?

Address: Naval Medical Research Institute
8901 Wisconsin Avenue, Building 17
Office of the Program Head, Room 226
Bethesda, Maryland 20889-5607

Geographical Location: Metropolitan Washington DC

3. Floor area of laboratory areas by containment level:

There are 233 square meters of BL1 containment level laboratory space. There are 47 square meters of BL2 containment level laboratory space. There are 35 square meters of BL-3 containment level laboratory space (upgraded in 1996). There is no BL4 containment level laboratory space. Total containment laboratory floor area is 315 square meters. The BDRP also makes use of BL3 and BL4 facilities at USAMRIID, Fort Detrick, Maryland, which are reported elsewhere herein.

4. The organizational structure of the facility:

I. Total number of personnel 14

II. Division of personnel:

Military	9
Civilian	5

III. Division of personnel by category:

Scientists	8
Engineers	0
Technicians	6
Administrative and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff:

Microbiology
Chemistry
Molecular Biology
Biochemistry
Parasitology
Pathology

V. Are contractor staff working in the facility?

There are 13 contractor staff working on cited projects at the facility.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (wholly) via the United States Army.

VII. What are the funding levels for the following programs areas:

FY96 Funding Levels:

Research -	\$1,300,000
Development -	\$0
Test and Evaluation -	<u>\$0</u>
	\$1,300,000

VIII. Briefly describe the publication policy of the facility:

Professional scientists are encouraged to publish worthy papers in peer review journals. In-house funds are available for this purpose. All publications must obtain the necessary command permission before submission.

IX. Provide a list of publicly available paper and reports resulting from work during the previous 12 months:

(1) Jumale, Hassan Abdirizak; Wallace, Mark R.; Burans, James; Thornton, Scott; Sharp, Truman; Ali, Mohamed M.; "Highly Resistant Bacterial Osteomyelitis in Somalia"; East African Medical Journal.

(2) Burans, J.P.; Hager, J.; O'Brien, T.; Plummer, A.; Keleher, A.; "Rapid Methods for the Diagnosis of *Bacillus anthracis* Infection in Clinical Samples Using Hand-Held Assays"; Salisbury Medical Bulletin, 87 (1996); (Special Supplement); p.36-37.

(3) Emanuel, Peter; Valdes, James; O'Brien Thomas; Burans, James; DasGupta, Bibhuit; and Eldefrawi, Mohyee; "Directing antigen specificity through the use of combinatorial phage display libraries"; Journal of Immunological Methods, 193 (1996); p.189-197.

(4) Narang, U.; Anderson, G.P.; Anderson, T.; Hager, J.; Burans, J.P.; Ligler, F.; "Fiber Optic-Bases Biosensor for Ricin, Biosensors & Bioelectronics"; (In press).

(5) Wallace, M.; Sharp T.; Smoak, B.; Iriye, C.; Rozmajzi, S.; Thornton, R.; Batchelor, R.; Magill, A.; Logel, H.; Longer, C.; Burans, J.; "Malaria Among United States Troops in Somalia"; The American Journal of Medicine, 100 (1996); p.49-55.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Current and past research at BDRP-NMRI has involved basic investigation of the diagnosis of various infectious disease agents and toxins. The goal of the program is the development of rapid diagnostic assays which would increase the rapid detection and diagnosis of infectious diseases potentially evidenced in military troops while deployed in unfamiliar surroundings, especially in those surroundings which do not have access to contemporary health care facilities. Laboratory efforts have been directed toward the development of reagents for diagnostic assays.

II. Agents:

Monoclonal and polyclonal antibody reagents and immunological assays are under development. Additionally nucleic based reagents and technologies are under development. Micro-organisms and toxins worked on include Anthrax, Venezuelan Equine Encephalitis, and Staphylococcus Enterotoxin B.

III. Outdoor Studies:

No outdoor biological defense studies are conducted at the Naval Medical Research Institute.

Form A Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

- a. Center for Biomolecular Science and Engineering
Bldg 30, Rooms 104, 106, 130, 131, and 401
- b. Chemistry Division
Bldg 207, Rooms 131, 135, 161 and 184B
- c. Optical Sciences Division
Bldg 703T

2. Where is it located?

Address: Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, D.C. 20375-5000

Geographical Location: Southwest, Washington DC

Note: The Naval Research Laboratory is a large multi-facility, multi-disciplined research laboratory of which facilities identified in Item 1 above are a part. Many non-biological programs are conducted at these facilities.

3. Floor area of laboratory areas by containment level:

There are no biological containment laboratories in the spaces of the facilities identified in Item 1.

4. The organizational structure of the facility:

I. Total number of personnel: 12

II. Division of personnel:

Military	0
Civilian	12

III. Division of personnel by category:

Scientists	9
Engineers	3
Technicians	0
Administrative and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff.

Biology
Biochemistry
Chemistry
Chemical Engineering
Engineering
Electrical Engineering
Physics

V. Are contractor staff working in the facility?

There are 10 contractor staff working on cited projects at the facility.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (wholly)

VII. What are the funding levels for the following program areas?

FY96 Funding Levels:

Research -	\$0
Development -	\$3,495,000
Test and Evaluation -	\$0
	\$3,495,000

VIII. Briefly describe the publication policy of the facility:

Free to publish in various journals, however level of activity does not generate a significant number of publications.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months:

(1) Baselt, D.R.; Lee, G.U.; Colton, R.J.; Biosensors based on Force Microscope Technology"; Journal of Vacuum Science Technology, v.B14 (1996).

(2) Golden, J.P.; Saaski, E.W.; Shriver-Lake, L.C.; Anderson, G.P.; Ligler, F.S.; "A Portable Multichannel Fiber Optic Biosensor for Field Detection"; submitted to Optical Engineering (1997 in press).

(3) Mauro, J.M.; Cao, L.K.; Kondracki, L.M.; Walz, S.E.; Campbell, J.R.; "Fiber-optic fluorometric sensing of polymer chain reaction-amplified DNA using an immobilized DNA capture protein"; Analytical Biochemistry, v.235 (1996); p.61-72.

(4) Tempelman, L.A.; King, K.D.; Anderson, G.P.; Ligler, F.S.; "Quantitating staphylococcal enterotoxin B in diverse media using a portable fiber optic biosensor"; Analytical Biochemistry, v.223; p.50-57.

(5) Seaver, M.; Pinto, J.F.; Eversole, J.D.; "Ultraviolet spectroscopy of *B. subtilis* spores in solution"; submitted to Optical Communications.

(6) Seaver, M.; Pinto, J.F.; Eversole, J.D.; "Fluorescence Spectroscopy of *B. subtilis* (*globigii*) and *E. coli* in Solution"; Trends in Optics and Photonics, v.3 (1996); Optical Society of America.

(7) Wadkins, R.M.; Golden, J.P.; Ligler, F.S.; "A Patterned Array Immunosensor for Multianalyte detection"; Journal of Biomedical Optics; (in press Sept 1996).

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

The objectives of research at NRL are to develop and test reliable systems for the detection of chemical and biological (CB) warfare agents below incapacitating levels in order to provide the user with early warning and contamination avoidance information.

II. Agents:

Apamin
Batrachotoxin
Brevotoxin
Charbydotoxin
Choleratoxin
Ciguatoxin
Conotoxin
Diphtheriatoxin
Maitotoxin

Ricin
Saxitoxin
Staphylococcus Enterotoxin B.

III. Outdoor Studies:

No outdoor biological defense studies are conducted at the Naval Research Laboratory.

Form A, Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

a. Building 1356 complex, Building 198

2. Where is it located?

Address: Naval Surface Warfare Center, Dahlgren Division
 17320 Dahlgren Road
 Dahlgren, Virginia 22448-5100

Geographical Location: Central-eastern Virginia

3. Floor area of laboratory areas by containment level:

There are no biological containment laboratories in Buildings 1356 or 198.

4. The organizational structure of the facility:

I. Total number of personnel: 20

II. Division of personnel:

Military	0
Civilian	20

III. Division of personnel by category:

Scientists	6
Engineers	12
Technicians	2
Administrative and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff:

Chemistry
 Chemical Engineering
 Electronic Engineering
 Mechanical Engineering

Physics

V. Are contractor staff working in the facility?

No

VI. What is (are) the sources of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (wholly)

VII. What are the funding levels for the following program areas?

FY96 Funding Levels:

Research -	\$302,000
Development -	\$4,837,000
Test & Evaluation -	<u>\$ 907,000</u>
	\$6,046,000

VIII. Briefly describe the publication policy of the facility:

Employees encouraged to publish but must have all publications approved by the Public Affairs Officer.

IX. Provide a list of publicly available paper and reports from work during the previous 12 months:

(1) Boyd, Jennifer; "Navy's Equipment Suite for Biological Agent Detection, the Interim Biological Agent Detection System (IBADS)"; Biology in Technology and Environment International Symposium for Defense Technology; Mannheim, Germany (Jan 1996).

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols:

I. Objectives:

The biodefense programs currently in work at Naval Surface Warfare Center, Dahlgren Division are:

(1) The engineering and development of biological detectors.

(2) Computer modeling and simulation capability of biological hazardous agents.
and

(3) Analysis of ambient atmospheric particulates (aerosols) with respect to particle size distribution and concentrations.

II. Agents:

None

III. Outdoor Studies:

No outdoor biological defense studies are conducted at this facility.

Form A, Part 2 (iii)
National Biological Defense Research And Development Program

III. Facilities

Complete one form for each facility declared in accordance with paragraph 7 in Form A: part 2 (ii). In shared facilities, provide the following information for the biological defense research and development portion only.

1. What is the name of the facility?

Holloman High Speed Test Track

2. Where is it located (include both address and geographical location)?

Address: 1521 Test Track Road
Holloman AFB, NM 88330-7847

Geographical Location: Ten miles west of Alamogordo, New Mexico

Note: Other non-biological programs are conducted at this facility. The following data is for the Theater Missile Defense (TMD) Lethality and Target Hardening (LTH) Program efforts to defeat potential biological warheads.

3. Floor area of laboratory areas by containment level:

BL1 N/A (m2)
BL2 N/A (m2)
BL3 N/A (m2)
BL4 N/A (m2)
Total Laboratory Floor Area N/A (m2)

4. The organizational structure of each facility.

I) Total number of personnel: 116

II) Division of personnel:

Military	8
Civilian	108

III) Division of personnel by category:

Scientists	0
Engineers	26
Technicians	80
Admin. And Support Staff	10

IV) List the scientific disciplines represented in the scientific/engineering staff.

Aerospace Engineering
 Civil Engineering
 Electronic Engineering
 Mechanical Engineering

V) Are contractor staff working in the facility? If so, provide an approximate number.

Yes. 27 (These personnel are not included in 4-I, II, III)

VI) What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Department of Defense?

U.S. Department of Defense (entirely)

VII) What are the funding levels for the following program areas:**FY96 Funding Levels:**

Research:	\$0
Development:	\$0
Test and Evaluation of Interceptor:	\$600,000
Performance (Against Simulated Biological Targets):	\$0
Total:	\$600,000

VIII) Briefly describe the publication policy of the facility:

This facility publishes reports dealing only with the performance of the sleds in providing the desired Test conditions. No analysis is performed by the Test Track concerning the lethality of the Interceptors. All reports and papers must be requested through the U.S. Army Space and Strategic Defense Command.

IX) Provide a list of publicly available papers and reports resulting from work during the previous 12 months (to include authors, titles, and full references).

None.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Perform lethality sled tests, to evaluate Theater Missile Defense systems against simulated biological threats.

II. Agents:

The following materials are used as simulants:

Corn starch
aluminum oxide
Bacillus thuringiensis

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Form A, Part 2 (iii)
National Biological Defence Research And Development Program

III. Facilities

Complete on form for each facility declared in accordance with paragraph 7 in Form A: part 2 (ii). In shared facilities, provide the following information for the biological defense research and development portion only.

1. What is the name of the facility?

Arnold Air Force Base
 AEDC Hypervelocity Range G Facility

2. Where is it located (include both address and geographical location)?

Address: 678 Second Street
 Arnold AFB, TN 37389-4401

Geographical Location: Seventy miles southeast of Nashville, Tennessee

Note: Other non-biological programs are conducted at this facility. The following data is for the Theater Missile Defense (TMD) Lethality Program efforts to defeat potential biological warheads.

3. Floor area of laboratory areas by containment level:

BL1 N/A (m2)
 BL2 N/A (m2)
 BL3 N/A (m2)
 BL4 N/A (m2)
 Total Laboratory Floor Area N/A (m2)

4. The organizational structure of each facility.

I) Total number of personnel 24

II) Division of personnel

Military	0
Civilian	24

III) Division of personnel by category:

Scientists	0
Engineers	7
Technicians	11
Admin. and Support Staff	6

IV) List the scientific disciplines represented in the scientific/engineering staff.

Aerospace Engineering
Mechanical Engineering
Electronic Engineering
Industrial Engineering

V) Are contractor staff working in the facility? If so, provide an approximate number.

Yes. 23 (These personnel are included in 4-I, II, III, IV)

VI) What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Department of Defense?

U.S. Department of Defense (entirely)

VII) What are the funding levels for the following program areas:

FY96 Funding Levels:

Research:	\$0
Development:	\$0
Test and Evaluation:	<u>\$144,000</u>
Total:	\$144,000

VIII) Briefly describe the publication policy of the facility:

Papers published may be distributed to U.S. Government agencies and their contractors. Other requests for these documents shall be referred to U.S. Army Space and Strategic Defense Command.

IX) Provide a list of publicly available papers and reports resulting from work during the previous 12 months (to include authors, titles, and full references).

None.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Perform sub-scale hypervelocity impact test of projectiles against sub-scale simulated biological threat targets.

II. Agents:

The following materials are used as simulants:

Cornmeal
aluminum oxide
silica
Bacillus thuringiensis
DiPel
1,1,1-trichloroethane.

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Form A, Part 2 (iii)
National Biological Defense Research And Development Program

III. Facilities

Complete on form for each facility declared in accordance with paragraph 7 in Form A: part 2 (ii). In shared facilities, provide the following information for the biological defense research and development portion only.

1. What is the name of the facility?

USAF Armstrong Laboratory
Chemical-Biological Defense Division

2. Where is it located (include both address and geographical location)?

Address: USAF Armstrong Laboratory
Chemical-Biological Defense Division
AMSCB-AL
Bldg 5101
Aberdeen Proving Ground, MD 21010-5423

Geographical Location: Northeastern Maryland

3. Floor area of laboratory areas by containment level:

BL1 (m2)	N/A
BL2 (m2)	N/A
BL3 (m2)	N/A
BL4 (m2)	N/A
Total Laboratory Floor Area: No BL containment	

This laboratory does not use pathogenic or toxic agents; therefore, there are no containment facilities within this laboratory. The personnel of this AF group are tenants on an Army Installation, using Army facilities, and following Army rules and regulations.

4. The organizational structure of each facility.

I) Total number of personnel: 5

II) Division of personnel:

Military	1
Civilian	4

III) Division of personnel by category:

Scientists	3
Engineers	1
Technicians	0
Admin. And Support Staff	1

IV) List the scientific disciplines represented in the scientific/engineering staff.

Microbiology
 Physics
 Chemistry
 Electrical Engineering
 Computer Science
 Molecular Biology

V) Are contractor staff working in the facility? If so, provide an approximate number.

Yes, 4 contractors.

VI) What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Department of Defense?

U.S. Department of Defense (entirely)

VII) What are the funding levels for the following program areas:

FY96 Funding Levels:

Research	\$2,300,000
Development	\$0
Test and Evaluation of Interceptor	\$0
Performance (Against Simulated Bio. Targets)	\$0
Total	\$2,300,000

VIII) Briefly describe the publication policy of the facility:

All reports and papers must be requested through the U.S. Army Space and Strategic Defense Command. The data produced are published as DoD Technical Reports or in open literature.

IX) Provide a list of publicly available papers and reports resulting from work during the previous 12 months (to include authors, titles, and full references).

Calomiris, J.J. Improved Detection of *Cryptosporidium parvum* in Drinking Water Using DNA Amplification. American Water Works Association, Annual Water Quality Technology Conference, November 1996, Boston, MA.

Calomiris, J.J. Detection of Microbial Pathogens in Drinking Water by DNA Amplification. U.S. Army Edgewood Research and Development and Engineering Center, Scientific Conference on Chemical and Biological Defense Research, November 1996, Aberdeen Proving Ground, MD.

Calomiris, J.J. Treatment of Natural Waters for Detection of *Cryptosporidium parvum* by DNA Amplification. 1996. American Society for Microbiology, Maryland Branch, Annual Meeting, June 1996, Baltimore, MD.

Calomiris, J.J. Treatment of Natural Waters for Detection of *Cryptosporidium parvum* by DNA Amplification. 1996. American Society for Microbiology, General Meeting, May 1996, New Orleans, LA.

Cheng, T.C., and J.J. Calomiris. 1996. A Cloned Bacterial Enzyme for Nerve Agent Decontamination. *Enzyme Microb. Technol.* 18:597-601.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.**I. Objectives:**

To develop a stand-alone point biological detector for military bases and aircraft interiors.

II. Agents:

Studies are done only in US Army laboratory facilities. The USAF, collocated in Army facilities, follows Army regulations. Most of the work involves non-pathogens, with any pathogen work done at Ft. Detrick, MD.

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility. Outdoor studies are done at US Army Dugway Proving Ground under Army regulations and "piggy-back" Army tests. All tests are conducted with non-pathogens.

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

U.S. Air Force Wright Laboratory

2. Where is it located?

Address: Wright Laboratory Armament Directorate
101 W. Eglin Blvd.
Eglin AFB, FL 32542

Geographical Location: Florida Panhandle

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	0
BL2 (sqM)	0
BL3 (sqM)	0
BL4 (sqM)	0
Total	0

4. The organizational structure of each facility.

I. Total number of personnel: 12

II. Division of personnel:

Military:	3
Civilian:	9

III. Division of personnel by category:

Scientists/Engineers:	6
Technicians:	6
Admin. and Support Staff:	0

IV. List the scientific disciplines represented in the scientific/engineering staff.

Mechanical & Electrical Engineering

V. Are contractor staff working in the facility?

Yes, 8 contractors.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Defense Special Weapons Agency (DSWA)

VII. What are the funding levels for the following program areas:

Research & Development:	\$150,000.00
Advanced Development:	
Joint Program Office/Operation and Maintenance:	
(given in FY96 dollars)	
Total:	\$150,000.00

VIII. Briefly describe the publication policy of the facility:

All publications are reviewed by management prior to release. All Air Force and DoD policies on release of publication are followed.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

No publicly available publications on BW related topics have been generated during the previous 12 months.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

The Hazardous Prediction Assessment Capability (HPAC) program is funded by DSWA under the Collateral Effects Environment (CEE) program. The CEE Program is developing a computer model to support field commander decisions on air strikes against potential biological and chemical (BC) targets to minimize the adverse impacts of BC agents. The computer model will predict the results of an attack on a BC weapon storage facility.

HPAC will provide experimental data to validate the computer code under development by DSWA for predicting collateral damage resulting from conventional

attacks on BC targets. There is no use of actual CB agents, nor is there any development of CB agents related to this program. The CB agent surrogate (Bacillus thuringiensis) was employed to characterize the threat. The program began in Jan 94 and is unclassified.

A report (WL-TR-95-7007) was produced that identified these tests and evaluations by the Wright Laboratory Armament Directorate (WL/MNMW). Testing was conducted on Eglin's test range (Site 64 - B).

II. Agents:

None

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Form A, Part 2(iii)
National Biological Defence Research and Development Program

III. Facilities

1. What is the name of the facility?

Denver Research Institute, University of Denver

2. Where is it located?

Address. University of Denver
Denver, CO 80210

Geographical location: Denver, CO

* NOTE: Other research programs unrelated to biological warfare defense are conducted at this facility. The following data is for Collateral Effects Program efforts performed at DRI.

3. Floor area of laboratory areas by containment level:

BL1 (m2)	N/A
BL2 (m2)	N/A
BL3 (m2)	N/A
BL4 (m2)	N/A
Total	N/A

4. The organizational structure of each facility. [The following personnel are not dedicated to the biological component of this effort; a majority of their time is spent on other activities.]

I. Total number of personnel 7

II. Division of personnel:

Military	0
Civilian	7

III. Division of personnel by category:

Scientists	1
Engineers	1

Technicians 5

IV. List the scientific disciplines represented in the scientific/engineering staff.

Chemistry
Mechanical Engineering

V. Are contractor staff working in the facility?
No

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Department of Defense?

U.S. Department of Defense (partly)

VII. What are the funding levels for the following program areas?

Research: \$ 0
Development: \$ 0
Test and Evaluation: \$ 250,000

VIII. Briefly describe the publication policy of the facility.

The results of all technical programs are documented in technical reports. These reports are classified if they impinge on national security by specifying U.S. military deficiencies, vulnerabilities or significant breakthroughs in technology.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. Briefly describe the biological defense work carried out at the facility, including type(s), of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

L Objectives:

Study the collateral effects of penetrating conventional weapons on underground

and harmed aboveground biological or chemical storage facilities.

II. Agents:

Tracers include: Glass beads, Dipel 2x containing Bt spores, Bg, and corn meal

III. Outdoor Studies:

Four tests studied the effects of penetrating weapons on containers of simulated agent and the resulting expulsion plumes. The studies obtained data on the mass expelled, plume geometries, and the properties of the expulsion jet and plume.

Form A, Part 2(iii)
National Biological Defence Research and Development Program

III. Facilities

1. What is the name of the facility?

Armed Forces Radiobiology Research Institute (AFRRI)

2. Where is it located?

Address: 8901 Wisconsin Avenue
Bethesda, MD 20889-5603
Geographical location: Bethesda, Maryland

* NOTE: Other research programs unrelated to biological warfare defense are conducted at this facility. The following data is for Agent Neutralization Program efforts performed at AFRRI.

3. Floor area of laboratory areas by containment level:

BL1 (m2) & BL2 (m2)	5737
BL3 (m2) & BL4 (m2)	0
Total	5737

4. The organizational structure of each facility. [The following personnel are not dedicated to the biological component of this effort; a majority of their time is spent on other activities.]

I. Total number of personnel: 164

II. Division of personnel:

Military	59
Civilian	105

III. Division of personnel by category:

Scientists	42
Engineers	5
Technicians	38
Administration	79

IV. List the scientific disciplines represented in the scientific/engineering staff.

Behavioral Science	Molecular Biology
Biochemistry	Physiology
Experimental Hematology	Radiation Physics
Genetics	Veterinary Medicine
Microbiology	

V. Are contractor staff working in the facility?

No

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Department of Defense?

U.S. Department of Defense (entirely)

VII. What are the funding levels for the following program areas?

Research:	\$ 300,000
Development:	\$ 0
Test and Evaluation:	\$ 0
Target Production:	\$ 0

VIII. Briefly describe the publication policy of the facility:

AFRRI encourages the widest possible dissemination of scientific findings through articles and abstracts published in peer-reviewed journals and books distributed worldwide. In addition, the Institute publishes AFRRI scientific reports quarterly, comprehensive annual research and historical reports, and other technical reports and special publications. AFRRI distributes these reports, as appropriate, within the Department of Defense, including the Defense Technical Information Center. AFRRI also distributes publications, as appropriate, to other federal and civilian research, medical and academic organizations and to university libraries through the Depository Library System of the Government Printing Office.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I Objectives:

AFRRI efforts are a multi-disciplinary approach to determine the sensitivity of biological warfare agents to ionizing radiation, thermal loads and shock.

II Agents:

In 1996, AFRRI only worked with biological surrogates: *Bacillus thuringiensis* var. *kurstaki* (Bt), *Bacillus subtilis* var. *niger* (Bg), the non-pathogenic Sterne strain of *Bacillus anthracis*, *Serratia marcescens*.

III Outdoor Studies:

No outdoor biological defense studies occur at AFRRI.

Form A, Part 2(iii)
National Biological Defence Research and Development Program

III. Facilities

1. What is the name of the facility?

Battelle - Columbus Operations

2. Where is it located?

Address: Battelle - Columbus Operations
505 King Avenue
Columbus, OH 43201-2693

Geographical location: Columbus, Ohio

* NOTE: Other non-biological programs are underway at this facility. The following data is for Agent Neutralization Program efforts to determine data and models describing the neutralization of threat agents to thermal environments.

3. Floor area of laboratory areas by containment level:

BL1 (m2)	400
BL2 (m2)	24
BL3 (m2)	0
BL4 (m2)	0
Total	424

4. The organizational structure of each facility. [The following personnel are not dedicated to the biological component of this effort: a majority of their time is spent on other activities.]

I. Total number of personnel: 90

II. Division of personnel:

Military	0
Civilian	90

III. Division of personnel by category:

Scientists	32
Engineers	16

Technicians 36
Administration 6

IV. List the scientific disciplines represented in the scientific/engineering staff.

Biochemistry	Chemical Engineering	Taxonomy
Biology	Materials Engineering	Toxicology
Chemistry	Veterinary Medicine	Zoology
Physics		

V. Are contractor staff working in the facility?

No

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Department of Defense?

US Department of Defense (partly)

VII. What are the funding levels for the following program areas?

Research: \$ 450,000
Development: \$ 0
Test and Evaluation: \$ 0
Target Production: \$ 0

VIII. Briefly describe the publication policy of the facility.

Battelle strongly encourages publication in peer-review journals. In-house funds are available for this purpose. Battelle considers all programs for publication if not classified by the Government or considered proprietary by industry.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

Determine thermal effectiveness on viability of bacteria and vegetative bacteria.

II. Agents:

For bacteria: *Bacillus thuringiensis* (spore and delta-endotoxin)

For vegetative bacteria: *Bacillus subtilis* var. *niger* (Bg), and *Serratia marcescens* (Sm).

III. Outdoor Studies:

Battelle did not participate in any outdoor studies.

Form A: Part 2(iii)**National Biological Defense Research and Development Program****III. Facilities****1. What is the name of the facility?**

General Research Corporation

2. Where is it located?

Address: General Research Corporation
5383 Hollister Avenue
Santa Barbara, CA 93111

Geographical location: Santa Barbara, CA

Note: Other non-biological programs are conducted at this facility. The following data are for the Theater Missile Defense (TMD) Lethality Program efforts to defeat potential biological warheads.

3. Floor area of laboratory areas by containment level:

BL1 (m ²)	N/A
BL2 (m ²)	N/A
BL3 (m ²)	N/A
BL4 (m ²)	N/A
Total Laboratory Floor Area (m ²)	N/A

4. The organizational structure of each facility.

Note: The following personnel are not dedicated to the biological component of the TMD Lethality Program; a majority of their time is spent on other activities.

I	Total Number of Personnel	12
II	Division of Personnel:	
	Military	0
	Civilian	12
III	Division of Personnel by Category:	
	Scientists	0

Engineers	9
Technicians	3
Administrative and Support Staff	0

IV. List the scientific disciplines represented in the scientific/engineering staff.

Mechanical Engineering
Electrical Engineering
Computer Science
Physics

V. Are contractor staff working in the facility?

Yes. They are the 12 General Research Corporation personnel identified above. This a contractor owned and operated facility.

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication of activity is wholly or partly financed by the Ministry of Defense?

U.S. Department of Defense (entirely)

VII. What are the funding levels for the following program areas:

Research:	\$0
Development:	\$0
Test and Evaluation:	\$0
Instrumentation Support of Testing:	\$120,000

VIII. Briefly describe the publication policy of the facility.

None

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

None

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

L. Objectives:

Instrumentation of targets to provide information about the engagement environment. Develop test fixtures and prepare for the bomblet aerodynamic-thermal demise experiment.

II. Agents:

None

III. Outdoor Studies:

No outdoor biological defense aerosol studies are conducted at this facility.

Form A: Part 2 (iii)
National Biological Defense Research and Development Program

III. Facilities

1. What is the name of the facility?

The Salk Institute, Government Services Division

2. Where is it located?

Address: The Salk Institute
Government Services Division
P.O. Box 250
Swiftwater, PA 18370

Geographical Location: East-central Pennsylvania

3. Floor area of laboratory areas by containment level:

BL1 (sqM)	789
BL2 (sqM)	1338
BL3 (sqM)	1930
BL4 (sqM)	0
Total	4057

4. The organizational structure of each facility.

I. Total number of personnel: 49

II. Division of personnel:

Military:	0
Civilian:	49

III. Division of personnel by category

Scientists:	3
Engineers:	0
Technicians:	30
Admin. and Support Staff:	16

IV. List the scientific disciplines represented in the scientific/engineering staff

Microbiology
Biochemistry
Veterinary Medicine
Biology
Immunology
Virology

V. Are contractor staff working in the facility?

Yes. Number: 49 (The facility is contractor owned and operated)

VI. What is (are) the source(s) of funding for the work conducted in the facility, including indication if activity is wholly or partly financed by the Ministry of Defense?

Department of Defense (partly).

VII. What are the funding levels for the following program areas:

FY96 Funding Levels:

Research (6.1):	\$ 0
Development (6.2 & 6.3):	\$94,612
Advanced Development (6.4):	\$739,104
Joint Program Office/Operation and Maintenance:	\$5,551,960
Total:	\$6,385,676

VIII. Briefly describe the publication policy of the facility:

No written policy.

IX. Provide a list of publicly available papers and reports resulting from work during the previous 12 months.

No publications.

5. Briefly describe the biological defense work carried out at the facility, including type(s) of microorganisms and/or toxins studied, as well as outdoor studies of biological aerosols.

I. Objectives:

This facility provides support to the medical portion of the BDRP in the form of pilot production of investigational vaccines, diagnostic materials, and

antibodies.

II. Agents:

Baculovirus/Anthrax Protective Antigen
Botulinum toxin
Western Equine Encephalitis Virus
Eastern Equine Encephalitis Virus
Venezuelan Equine Encephalitis Virus
Vaccinia Virus
Francisella tularensis
Coxiella burnetii antigens
Botulinum toxoids A & B
Ricin

III. No outdoor biological defense aerosol studies are conducted at this facility.

CONFIDENCE BUILDING MEASURE B (Form B (1))

Background Information on Outbreaks of Reportable Infectious Diseases

Disease	Number of cases per year			
	1992	1993	1994	1995
AIDS	45,472	103,691	78,279	71,547
Amiasis	2,942	2,970	2,983	•
Anthrax	--	--	--	--
Asptic meningitis	12,223	12,848	8,932	•
Botulism, total	91	97	143	97
Botulism, food borne	21	27	50	24
Botulism, infant	66	65	85	54
Brucellosis	105	120	119	98
Chancroid	1,886	1,399	773	606
Cholera	103	18	39	23
Diphtheria	4	--	2	1
Encephalitis, primary	774	919	717	•
Indeterminate	NA	NA	NA	NA
Post-infectious	129	170	143	•
Gonorrhea	501,409	439,673	418,068	392,848
Granuloma inguinale	6	19	3	•
Haemophilus influenzae	1,412	1,419	1,174	1,180
Hansen disease	172	187	136	144
Hantavirus pulmonary syndrome	--	--	32	23
Hepatitis A	23,112	24,218	29,796	31,582
Hepatitis B	16,126	13,361	12,517	10,805
Hepatitis, non-A non B*	6,010	4,786	4,470	4,576
Hepatitis, unspecified	884	627	444	•
Legionellosis	1,339	1,280	1,615	1,241
Leptospirosis	54	51	38	•
Lyme disease	9,895	8,257	13,043	11,700
Lymphogranuloma venereum	302	285	235	•
Malaria	1,087	1,411	1,229	1,419
Measles (rubeola)	2,237	312	963	281
Meningococcal infections	2,134	2,637	2,886	3,243
Mumps	2,572	1,692	1,537	906
Murine typhus fever	28	25	•	•

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ANNEX II

CONFIDENCE BUILDING MEASURE B

**Exchange of Information on All Outbreaks of
Infectious Diseases and Similar Occurrences
Caused by Toxins**

United States of America

April 1997

Disease	1992	1991	1994	1995	1996
Pertussis (whooping cough)	4,083	6,586	4,617	5,137	6,467
Plague	13	10	17	9	5
Polioomyelitis, paralytic ^a	6	3	--	--	--
Psittacosis	92	60	38	64	45
Rabies, animal	8,589	9,377	8,147	7,811	6,676
Rabies, human	1	3	6	5	2
Rheumatic fever, acute	75	112	112	*	*
Rocky Mountain spotted fever	502	456	465	590	745
Rubella (German measles)	160	192	227	128	438
Rubella, congenital syndrome	11	5	7	6	NA
Salmonellosis excluding typhoid fever	40,912	41,641	43,323	45,970	43,718
Shigellosis	23,931	32,198	29,769	32,080	23,950
Syphilis, primary/secondary	33,973	26,498	20,627	16,500	11,110
Syphilis, total all stages	112,581	101,259	81,696	68,953	52,663
Tetanus	45	48	51	41	27
Toxic-shock syndrome	244	212	192	191	136
Trichinosis	41	16	32	29	17
Tuberculosis	26,673	25,313	24,361	22,860	19,096
Tularemia	159	132	96	*	*
Typhoid fever	414	440	441	363	355
Varicella (chickenpox)	158,364	134,722	151,219	120,624	54,883

^aCumulative up through week ending December 30, 1996.

^bUpdated monthly; last update December 24, 1996.

^cOf 276 cases among children less than 5 years of age, serotype was reported for 94 and of those 30 were type b.

^dThe following diseases are no longer notifiable: Anebiasis, Aseptic meningitis, Encephalitis (any kind), Granuloma inguinale, Hepatitis, (unspecified), Leptospirosis, Lymphogranuloma venereum, Murine typhus fever, Rheumatic fever and Tularemia.

Note: All 1996 totals are likely to change substantially as more comprehensive reports are received from the states.

ANNEX III

CONFIDENCE BUILDING MEASURE C

Encouragement of Publication of Results and
Promotion of Use of Knowledge

United States of America

April 1997

CENTERS FOR DISEASE CONTROL AND PREVENTION

NATIONAL CENTER FOR INFECTIOUS DISEASES

INFORMATION FOR THE PUBLIC AND PUBLIC HEALTH PROFESSIONALS

PUBLICATIONS AVAILABLE:

- 1) Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States
- 2) Centers for Disease Control and Prevention, Viral/Rickettsial Diseases Laboratory
- 3) Child Care in a Changing World
- 4) Cholera Prevention
- 5) Defeating Cholera: Clinical Presentation and Management
- 6) Dengue and Dengue Hemorrhagic Fever: General Information
- 7) Dengue and dengue hemorrhagic Fever: Information for Health Care Practitioners
- 8) Dengue and Dengue Hemorrhagic Fever: Questions and Answers
- 9) Division of Bacterial and Mycotic Diseases
- 10) Division of Vector-Borne Infectious Diseases, NCID
- 11) Emerging Infectious Disease Threats
- 12) The Facts About Chronic Fatigue Syndrome
- 13) Group B Streptococcal Infections
- 14) Hepatitis A Prevention
- 15) Hepatitis B Prevention and Pregnancy
- 16) Hospital Infections Program, NCID
- 17) How to Prevent Transmission of Intestinal Roundworms from Pets to People
- 18) Laboratory Methods for the Diagnosis of *Vibrio cholerae*
- 19) Lyme Disease
- 20) Prevent Hantavirus Pulmonary Syndrome
- 21) Preventing Foodborne Illness: *Escherichia coli* O157:H7 Infection

- 22) Preventing Foodborne Illness: Listeriosis
- 23) Preventing Malaria in Travelers
- 24) Reference and Disease Surveillance Manual
- 25) *Salmonella enteritidis* Infection

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Encouragement of Publication of Results and Promotion of Use of Knowledge

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JOURNAL ARTICLES:

FLUORESCENCE PARTICLE COUNTER FOR DETECTING AIRBORNE BACTERIA AND OTHER BIOLOGICAL PARTICLES

Author(s): PINNICK RG; HILL SC; NACHMAN P; PENDLETON JD; FERNANDEZ GL; MAYO MW; BRUNO JG

Journal: AEROSOL SCIENCE AND TECHNOLOGY, 1995, V23, N4 (NOV), P653-664

Document Type: ARTICLE (Abstract Available)

A COLOR IMAGE-ANALYSIS METHOD FOR ASSESSMENT OF GERMINATION
BASED ON DIFFERENTIAL FLUORESCENCE STAINING OF
BACTERIAL SPORES AND VEGETATIVE CELLS USING ACRIDINE-ORANGE

Author(s): BRUNO JG; MAYO MW

Journal: BIOTECHNIC & HISTOCHEMISTRY, 1995, V70, N4 (JUL), P175-184

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

MEASURING DIAMETERS OF ROD-SHAPED BACTERIA IN-VIVO WITH
POLARIZED-LIGHT SCATTERING

Author(s): BRONK BV; DRUGER SD; CZEGE J; VANDEMERWE WP

Journal: BIOPHYSICAL JOURNAL, 1995, V69, N3 (SEP), P1170-1177

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

AEROSOL-FLUORESCENCE SPECTRUM ANALYZER - REAL-TIME
MEASUREMENT OF EMISSION-SPECTRA OF AIRBORNE BIOLOGICAL
PARTICLES

Author(s): HILL SC; PINNICK RG; NACHMAN P; CHEN G; CHANG RK; MAYO
MW; FERNANDEZ GL

Journal: APPLIED OPTICS, 1995, V34, N30 (OCT 20), P7149-7155

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14508681 Genuine Article#: TT690 No. References: 33

Title: IMMUNOMAGNETIC-ELECTROCHEMILUMINESCENT DETECTION OF
ESCHERICHIA-COLI O157 AND SALMONELLA-TYPHIMURIUM IN FOODS AND
ENVIRONMENTAL WATER SAMPLES

Author(s): YU H; BRUNO JG

Journal: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 1996, V62, N2
(FEB), P587-592

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Emanuel, Peter and Valdes, James. DIRECTING ANTIGEN SPECIFICITY
TOWARDS BOTULINUM NEUROTOXIN AND ASSOCIATED
NON-NEUROTOXIN PROTEINS WITH COMBINATORIAL PHAGE DISPLAY
LIBRARIES. *Journal of Immunological Methods*,
March 1996.

14784908 Genuine Article#: UL575 No. References: 25

Title: HIGHLY SELECTIVE ACRIDINE AND ETHIDIUM STAINING OF
BACTERIAL-DNA AND RNA

Author(s): BRUNO JG; SINCOCK SA; STOPA PJ

Corporate Source: APPL RES ASSOCIATES, ARMSTRONG LAB, ENVIRON
DIRECTORATE, 139 BARNES DR, SUITE 2, BLDG 1117/TYNDALL AFB//FL/32403;
SCI & TECHNOL CORP/EDGEWOOD//MD/21040; USA, EDGEWOOD RES DEV &
ENGN CTR, SCBRD, RTE/ABERDEEN PROVING GROUND//MD/21010

Journal: BIOTECHNIC & HISTOCHEMISTRY, 1996, V71, N3 (MAY), P130-136

ISSN: 1052-0295

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14749598 Genuine Article#: UJ228 No. References: 32

Title: CLONING AND EXPRESSION OF A GENE ENCODING A BACTERIAL ENZYME DECONTAMINATION OF ORGANOPHOSPHORUS NERVE AGENTS A. D NUCLEOTIDE-SEQUENCE OF THE ENZYME

Author(s): CHENG TC; HARVEY SP; CHEN GL

Corporate Source: USA.EDGEWOOD RES,CTR DEV & ENGN,RES & TECHNOL DIRECTORATE/ABERDEEN PROVING GROUND//MD/21010; KENNEDY KRIEGER INST/BALTIMORE//MD/21005

Journal: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 1996, V62, N5 (MAY), P1636-1641

ISSN: 0099-2240

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: IMMUNOMAGNETIC-ELECTROCHEMILUMINESCENT DETECTION OF BACILLUS-ANTHRACIS SPORES IN SOIL MATRICES

Author(s): BRUNO JG; YU H

Corporate Source: USAF.ARMSTRONG LAB,ENVIRON DIRECTORATE,139 BARNES DR,STE 2/TYNDALL AFB//FL/32403; USA.EDGEWOOD RES DEV & ENGN CTR,SYST RES LABS/ABERDEEN PROVING GROUND//MD/21010

Journal: APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 1996, V62, N9 (SEP), P3474-3476

ISSN: 0099-2240

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14993996 Genuine Article#: VB391 No. References: 16

Title: BIOREACTOR STRATEGIES FOR THE TREATMENT OF GROWTH-INHIBITORY WASTE - AN ANALYSIS OF THIODIGLYCOL DEGRADATION, THE MAIN HYDROLYSIS PRODUCT OF SULFUR MUSTARD

Author(s): LEE T; PHAM MQ; WEIGAND WA; HARVEY SP; BENTLEY WE

Corporate Source: UNIV MARYLAND,INST BIOTECHNOL,CTR AGR BIOTECHNOL/COLLEGE PK//MD/20742; UNIV MARYLAND,INST BIOTECHNOL,CTR AGR BIOTECHNOL/COLLEGE PK//MD/20742; UNIV MARYLAND,DEPT CHEM ENGN/COLLEGE PK//MD/20742; USA,EDGEWOOD RES DEV & ENGN CTR/ABERDEEN PROVING GROUND//MD/21010

Journal: BIOTECHNOLOGY PROGRESS, 1996, V12, N4 (JUL-AUG), P533-539

ISSN: 8756-7938

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14902261 Genuine Article#: UV325 No. References: 34

Title: DIRECTING ANTIGEN-SPECIFICITY TOWARDS BOTULINUM NEUROTOXIN WITH COMBINATORIAL PHAGE DISPLAY LIBRARIES

Author(s): EMANUEL P; OBRIEN T; BURANS J; DASGUPTA BR; VALDES JJ;
ELDEFRAWIM

Corporate Source: ERDEC,SCBRD,RT,BLDG E3549,ROOM C-204, EDGEWOOD
AREA/ABERDEEN PROVING GROUND//MD/21010; UNIV MARYLAND,SCH
MED,DEPT PHARMACOL & EXPTL THERAPEUT/BALTIMORE//MD/21201;
USA,RES DEV & ENGN

CTR,RES & TECHNOL DIRECTORATE/ABERDEEN PROVING
GROUND//MD/21010; USN,MED RES INST/BETHESDA//MD/20889; UNIV
WISCONSIN,DEPT FOOD MICROBIOL & TOXICOL/MADISON//WI/53706
Journal: JOURNAL OF IMMUNOLOGICAL METHODS, 1996, V193, N2 (JUN 21),
P189-197

ISSN: 0022-1759

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14893750 Genuine Article#: UU978 No. References: 13

Title: ENHANCING IMMUNOELECTROCHEMILUMINESCENCE (IECL) FOR
SENSITIVE BACTERIAL DETECTION

Author(s): YU H

Corporate Source: USAF,AL,CALSPAN SRL CORP,EDGEWOOD RES DEV & ENGN
CTR,BLDG E3549/ABERDEEN PROVING GROUND//MD/21010

Journal: JOURNAL OF IMMUNOLOGICAL METHODS, 1996, V192, N1-2 (JUN 10),
P63-71

ISSN: 0022-1759

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14886311 Genuine Article#: UU402 No. References: 16

Title: DETECTION OF PATHOGENIC AND NONPATHOGENIC BACTERIA BY
MATRIX-ASSISTED LASER DESORPTION/IONIZATION TIME-OF-FLIGHT
MASS-SPECTROMETRY

Author(s): KRISHNAMURTHY T; ROSS PL; RAJAMANI U

Corporate Source: USA,EDGEWOOD RD&E CTR/ABERDEEN PROVING
GROUND//MD/21010

Journal: RAPID COMMUNICATIONS IN MASS SPECTROMETRY, 1996, V10, N8,
P883-888

ISSN: 0951-4198

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

14847306 Genuine Article#: UQ542 No. References: 14

Title: A CLONED BACTERIAL ENZYME FOR NERVE AGENT
DECONTAMINATION

Author(s): CHENG TC; CALOMIRIS JJ

Corporate Source: USA,EDGEWOOD RES DEV & ENGN CTR/ABERDEEN
PROVING GROUND//MD/21010

Journal: ENZYME AND MICROBIAL TECHNOLOGY, 1996, V18, N8 (JUN),
P597-601

ISSN: 0141-0229

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

ANNEX IV

CONFIDENCE BUILDING MEASURE D

Active Promotion of Contacts

United States of America

April 1997

CONFIDENCE BUILDING MEASURE D**Active Promotion of Contacts****PRESENTATIONS:**

Hadfield TL, Hilyard EJ, Evans BE, Basila F, Voorhees K, Sickenberger D. Identification of Bacteria Fatty Acids using GC and Py MS. *Biologie in Technik und Umwelt*. 22-24 Jan 1996. Mannheim, Germany at Bundesakademie für Wehrverwaltung und Wehrtechnik Internationales Wehrtechnisches Symposium.

Hadfield TL. Future applications of the CBMS in Biodefense. 14-16 Feb 1996. CBMS Users Group. Colorado State University of Mines, Golden, CO.

Hadfield TL. In Situ methylation of Fatty Acids during pyrolysis. 21 Feb 1996. AFIP Staff Conference. Washington D.C.

Crawford, R., Drazek S, Sasala K, Hadfield TL, Warren R, Hoover D. Infection of human phagocytes by *Brucella* spp. ASM (abstract #D-89)

Eze M, Crawford R, Drabick J, Hadfield TL, Bhattacharjee A, Warren R, Hoover D. Effects of serum opsonization on uptake and growth of *Brucella melitensis* 16M in mouse peritoneal macrophages. ASM (abstract #D88)

Kelly K, Hadfield TL, Fox K, Fox A. Differentiation of *Brucella* species using PCR and gas chromatography-mass spectroscopy. ASM (abstract #R-15)

Hadfield TL. Emergency response procedures for Biosafety level-3 laboratories incidents by the Fire Department Personnel. July 2 and 9, 1996. 40 fire fighters.

Hadfield TL. Brucellosis. USU Tropical Medicine Course, July 24, 1996 ~ 100 participants.

Bhattacharjee, A.; Gemski, P.; and M. Jett. 1996. Activities of staphylococcal enterotoxin B (SEB) conjugated with adipic acid dihydrazide. Abstracts 96th General Meeting of The American Society for Microbiology, New Orleans, LA, May 19-23, B-211, page 191.

Crawford, R.; Drazek, S.; Sassala, K.; Hadfield, T.; Warren, R.; & Hoover, D. (1996). Infection of human mononuclear phagocytes by *Brucella* sp. (Abstract). American Society of Microbiology 96th Annual Meeting, p. D89. New Orleans, Louisiana.

Eze, M.; Crawford, R.; Drabick, J.; Hadfield, T.; Warren, R.; & Hoover, D. (1996). Effects of serum opsonization on uptake and growth of *Brucella melitensis* 16M in mouse

peritoneal macrophages (Abstract). In American Society of Microbiology 96th Annual Meeting, p. D88. New Orleans, Louisiana.

Matyas, G.R.; Alving, C.R. Protection against ricin by intranasal immunization with liposomes. FASEB Journal 10:1099 Meeting Abstract.

Yan, Z.; Gemski, P.; Neill, R.; Yang, D.C.H.; Jett, M. Differentiation of staphylococcal-enterotoxin B-induced TNF-alpha production and t-cell proliferation. FASEB Journal 10: Meeting Abstract.

Jett, M.; Welch, C.; McMorrow, S.; Boyle, T.; Hoover, D.; Gemski, P. Inhibition of staphylococcal enterotoxin B (SEB)- stimulated mitogenicity in human T-cell cultures by blocking lipoxigenase, but not cyclooxygenase pathways. Toxicon. 34:295. Fifth Pan American Symposium on Animal, Plant, and Microbial Toxins, Frederick, Maryland, USA, July 30 - August 4, 1995.

TI- Boyle, T.; Jett, M.; Neill, R.; Gemski, P. Mutants of staphylococcal enterotoxin B showed reduced mitogenic activity in cultures of human lymphocytes. Abstracts of the General Meeting of the American Society for Microbiology. Abstract Pg 0 96.

Bhattacharjee, A.; Gemski, P.; and M. Jett. 1996. Activities of staphylococcal enterotoxin B (SEB) conjugated with adipic acid dihydrazide. Abstracts 96th General Meeting of The American Society for Microbiology, New Orleans, LA, May 19-23, B-211, page 191.

Crawford, R.; Drazek, S.; Sassala, K.; Hadfield, T.; Warren, R.; & Hoover, D. (1996). Infection of human mononuclear phagocytes by *Brucella* sp. (Abstract). American Society of Microbiology 96th Annual Meeting, p. D89. New Orleans, Louisiana.

Eze, M.; Crawford, R.; Drabick, J.; Hadfield, T.; Warren, R.; & Hoover, D. (1996). Effects of serum opsonization on uptake and growth of *Brucella melitensis* 16M in mouse peritoneal macrophages (Abstract). In American Society of Microbiology 96th Annual Meeting, p. D88. New Orleans, Louisiana.

Matyas, G.R.; Alving, C.R. Protection against ricin by intranasal immunization with liposomes. FASEB Journal 10:1099 Meeting Abstract.

Yan, Z.; Gemski, P.; Neill, R.; Yang, D.C.H.; Jett, M. Differentiation of staphylococcal-enterotoxin B-induced TNF-alpha production and t-cell proliferation. FASEB Journal 10: Meeting Abstract.

Jett, M.; Welch, C.; McMorrow, S.; Boyle, T.; Hoover, D.; Gemski, P. Inhibition of staphylococcal enterotoxin B (SEB)- stimulated mitogenicity in human T-cell cultures by blocking lipoxigenase, but not cyclooxygenase pathways. Toxicon. 34:295. Fifth Pan American Symposium on Animal, Plant, and Microbial Toxins, Frederick, Maryland, USA, July 30 - August 4, 1995.

TI- Boyle, T.; Jett, M.; Neill, R.; Gemski, P. Mutants of staphylococcal enterotoxin B showed reduced mitogenic activity in cultures of human lymphocytes. Abstracts of the General Meeting of the American Society for Microbiology. Abstract Pg 0 96.

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SP-036 Proceedings of the 1994 ERDEC Scientific Conference on
Chemical and Biological Defense Research, 15-18
November 1994
May, 1996
UNCLASSIFIED - public release
Berg, P.J. Reeves
R&T

SP-043 Proceedings of the 1995 ERDEC Scientific Conference and
Biological Defense Research 14-17 Nov 1995
July, 1996
UNCLASSIFIED - public release
Berg
R&T

Scientific Conference on Obscuration and Aerosol Research
Dates: 23-27 June 1997,
POC: Dr. E. Stuebing
Main Subject: Aerosol research, obscuring aerosol and its effects
Timeframe of conference: 3 days
Conditions for participation: Invitations sent to interested individuals

Joint Services Workshop on Next Generation Biological Mass
Spectrometry
Dates: 28-30 July 1997
POC: Dr. R. Long
Main Subject: Mass spectrometry of biological materials
Timeframe of conference: 3 days
Conditions for participation: Invitations sent to select individuals

Scientific Conference on Chemical & Biological Defense Research
Dates: 18-21 November 1997
POC: Ms. D. Berg
Main Subject: chemical and biological defense research
Timeframe of conference: 4 days
Conditions for participation: Invitations sent to interested individuals

ANNEX V

CONFIDENCE BUILDING MEASURE E

Declaration of Legislation, Regulation and Other Measures

United States of America

April 1997

FORM E

DECLARATION OF LEGISLATION, REGULATIONS AND OTHER MEASURES

RELATING TO	LEGISLATION	REGULATIONS	OTHER MEASURES	AMENDED SINCE LAST YEAR
a) Development, production stockpiling, acquisition or retention of microbial or other biological agents, or toxins, weapons, equipment and means of delivery specified in Article I	YES/NO	YES/NO	YES/NO	YES/NO
b) Exports of micro- organisms* and toxins	YES/NO	YES/NO	YES/NO	YES/NO
c) Imports of micro- organisms* and toxins	YES/NO	YES/NO	YES/NO	YES/NO

*Micro-organisms pathogenic to man, animals and plants in accordance with the Convention.

ANNEX VI

CONFIDENCE BUILDING MEASURE F

Declaration of Past Activities in Offensive and/or
Defensive Biological Research and Development Programs

United States of America

April 1997

U.S. Offensive BW Program (1941-1972)

1941-1945

Policy

Between 1941 and 1945, the United States' overall military research and development (R&D) efforts were directed towards meeting wartime needs and security concerns. In 1941, the U.S. began to seriously consider the potential threat of biological warfare (BW), based upon the assumption that other countries were conducting biological warfare experimentation in secret. A Secretary of War committee, formed in conjunction with the National Academy of Sciences, concluded in February 1942, that BW was indeed feasible, and urged that appropriate steps be taken in order to reduce U.S. vulnerability to BW attack.

In 1942, a civilian organization called the War Research Service (WRS) was established within the Federal Security Agency in order to oversee and organize the BW program and to serve as liaison between involved governmental departments and branches of the Armed Services. As the BW program expanded, the WRS was dissolved and the Army Chemical Warfare Service (CWS) assumed responsibility for the BW program within the War Department. Drawing upon information ascertained during initial defensive research and development efforts, the War Department began intensive work on offensive BW applications in 1944.

During World War II, the United States had not yet established an official policy concerning the use of biological warfare, although the U.S. BW policy implicitly followed the CW policy of "use in retaliation only" as stated in 1943.

Research and Development

While the first task undertaken by the WRS was the development of defensive measures to protect the population against BW attack, the major achievement of the WRS was the organization of a R&D program to extend the boundaries of knowledge against possible enemy use of BW agents. All known pathogenic agents were subject to screening to determine the possibility of the agents being used by the enemy.

Camp Detrick in Frederick, Maryland, was chosen as the site for specially designed laboratories and pilot production facilities. Personnel at Camp Detrick conducted antipersonnel, antianimal, and anticrop BW research and development for the remainder of the war. Study of an agent normally consisted of selecting a strain, determining the nutritional requirements for growth, developing laboratory production methods, determining storage requirements, investigating dissemination methods, determining pathogenicity, conducting defensive research (i.e., immunization studies), and conducting therapeutic investigations.

By the end of the war, the CWS had full operating authority for all aspects of BW work excepting a project on plague, which was carried out by the Naval Research Unit No. 1 at Berkeley, California, and a collaborative project with Canada on rinderpest at Grosse Ile in the St. Lawrence River.

The safety program began with the recognized need to protect people inside and outside the laboratories as well as to protect the local environment. Procedures and equipment were designed to address the treatment of contaminated liquid wastes, contaminated vent gases, and process air. Developments during this period included improved protective clothing, safety cabinets, and stainless steel hood systems to accommodate the most hazardous operations.

Test and Evaluation

Beginning in 1943, testing was conducted at Camp Detrick as part of the BW research and development program. This testing was carried out in chambers and on small test grids. Large-

scale field testing was conducted at Horn Island, Mississippi, and Granite Peak Installation at Dugway, Utah.

The CWS acquired Horn Island, Mississippi in March 1943. The general functions of Horn Island Installation were to maintain a facility to conduct field trials of BW agents, munitions, and defensive methods and materials assigned for investigation; plan and conduct experiments to reveal methods, munitions, weapons, and devices best adapted to the dispersal of agents and to evaluate the effects of those agents on animals under field trial conditions; analyze and report results with recommendations to higher authority; and to enforce safety measures and recommend changes when required. Biological research and testing was conducted on a limited scale between October 1943 and August 1945. Twenty-three trials were conducted using botulinum toxin, principally as a filling in the British 4-pound Mk I bomb. In this series of tests, it was shown that the British bomb, filled with 12.15 percent toxin slurry, would probably not be a lethally efficient weapon. The simulant *Bacillus globigii* (BG) was also field tested extensively at Horn Island. The Horn Island facility was declared excess at the end of World War II and deactivated in November 1945.

In January 1944, the CWS began building a BW test facility at Granite Peak Installation (GPI) near Dugway, Utah. The facility was fully operational in June 1944. Granite Peak Installation became the major field study center for testing live biological agents in the United States. In 1944, GPI was primarily involved in testing the British 4-pound bomb filled with anthrax. GPI was inactivated in September 1945.

Production, Stockpiling, and Weaponization

During World War II, four pilot plants were constructed at Camp Detrick. The purpose of these plants was to produce agent for use in research, development, and testing; and to assist in establishing the proper design and safety criteria for large-scale production facilities.

Pilot Plant 1 was completed in October 1943 and was designed for the production of botulinum toxin. Pilot Plant 2 was completed in March 1944 and was built to produce *Bacillus anthracis* and the simulant BG. Pilot Plant 3 was completed in February 1945 and was designed to produce plant pathogens. Pilot Plant 4 was completed in January 1945 and consisted of two structures. One building was used to produce non-vegetative bacterial agents; the second structure was used to study the production of rickettsial agents in eggs.

The site chosen to be the large-scale, U.S. production facility was the inactive Vigo Ordnance Plant at Terre Haute, Indiana. Beginning in 1944, the CWS began converting existing structures to support BW production, and special production facilities were built to include: laboratories; refrigerator plants; and slurry heater, catalyst, reactor, and separation buildings.

The Vigo Plant was developed to manufacture BW agents and vaccines, fill and load BW munitions, and breed laboratory animals. Its primary mission was to be the manufacture and loading of *Bacillus anthracis* into British 4-pound bombs, but no pathogenic agent was ever produced at this plant. However, beginning in June 1945, 8,000 pounds of the non-pathogenic simulant BG was produced. At the termination of World War II, the plant was decommissioned and eventually sold to Charles Pfizer and Co.

Personnel at Camp Detrick were also responsible for the production of botulinum toxoid. Early in 1944, Camp Detrick began producing Type A toxoid and arranged to have Wyeth, Inc. (formerly Gillard laboratories) bottle the product. This toxoid was shipped to Europe as a hedge against Germany employing botulism. Type B toxoid production began in the summer of 1944 at Camp Detrick, but production was eventually contracted out to Parke, Davis and Co. This toxoid was ultimately mixed with Type A toxoid and shipped to the Pacific theater. None of these toxoids were ever administered to the military, and they were destroyed at the end of World War II.

1946-1949

Policy

Although funding for the U.S. biological warfare program was reduced after World War II and some aspects of the program were phased out, the U.S. military establishment continued to sponsor the biological warfare program. Immediately following the war, U.S. policymakers extended President Roosevelt's 1943 pledge of no first use of chemical weapons to encompass biological warfare.

Between 1946 and 1949, the guidance and organizational structure of the U.S. BW program largely reflected the configuration established during WWII. The lead agency for BW was the Army Chemical Corps (the former Chemical Warfare Service), which was responsible for attaining BW preparedness within the context of a "use in retaliation only" policy. Overall technical direction for the BW research and development efforts was provided by the Research and Development Board (RDB) of the newly formed Office of the Secretary of Defense (OSD).

The channel of authority for management control proceeded from the Secretary of Defense, through the War Department (renamed the Department of the Army), to the Army Chief Chemical Officer, and on to the Commanding Officer and Technical Director at Camp Detrick. In addition to pursuing BW research and development for its own requirements, the Army conducted R&D projects for the Air Force and Navy in support of their military requirements. The military branches coordinated their BW efforts, with the Army Chemical Corps maintaining a primary role in program guidance and activity. Both the Air Force and Navy had personnel stationed at Camp Detrick.

During 1949 and into 1950, the U.S. policy concerning biological warfare was reevaluated at the highest civilian and military levels. This review culminated in February 1950 when the President approved the continuation of the BW "use in retaliation only" policy.

Research and Development

Research and development centered on those agents which were found to be viable during World War II. Consequently, studies on anthrax, botulinum toxin, brucellosis, tularemia, and other bacterial agents continued during this period to improve virulence, stability, and yield. Increased emphasis was given to research on viral and rickettsial agents. There were also smaller programs in antianimal (rinderpest, hog cholera, and Newcastle virus) and anticrop (wheat stem rust, rye stem rust, and rice blast) BW as outgrowths of the World War II effort.

Test and Evaluation

At the end of World War II, all the field test sites – with the exception of Dugway Proving Ground – were abandoned, and the primitive Granite Peak Installation was inactivated. Small-scale outdoor testing with simulants *Bacillus globigii* (BG), *Serratia marcescens* (SM), *Escherichia coli*, and fluorescent particles was conducted at Camp Detrick. Additionally, simulant testing using BG and SM was conducted on both public and non-public domains in 1949. These test materials were considered to be harmless by scientific and medical experts at the time.

Pathogenic agent testing at Camp Detrick was confined to closed, laboratory-sized chambers, and was directly related to agent evaluation and medical defensive aspects. In 1949, construction of an enclosed 1,000,000 liter test sphere (called the 8-ball) was built at Camp Detrick, and BW explosive munitions tests with pathogens were started. No controlled human experimentation was conducted at Camp Detrick, even though such experimentation was an acceptable practice in the development of vaccines within the U.S. medical community. Dugway Proving Ground was reopened in 1949, but pathogenic testing did not begin there until the 1950s.

Joint trials with the British using *Brucella suis*, *Pasteurella tularensis*, and *Bacillus anthracis* were conducted at sea in the Caribbean area in the winter of 1948-49. In 1949 and again in 1950, operating personnel from Camp Detrick tested the prototype E48R2 (later called the M114) 4-pound bomblet at Dugway Proving Ground, using simulants the first year and *Brucella suis*, as well, the second year. Open air testing of infectious biological agents was considered essential to the ultimate understanding of biological warfare because of the many unknown factors affecting the degradation of the organisms in the atmosphere. Safety in BW research and development, as well as in testing, was always a major concern. Adequate safety and medical controls were operative prior to the initiation of any new BW projects.

Production, Stockpiling, and Weaponization

From the end of World War II until 1950, no production was carried out for the purpose of operational readiness, no facilities were available for such work, and no agent was stockpiled. After the war, facilities at Vigo were deactivated and leased to a pharmaceutical concern producing antibiotics. It was estimated that, in case of an emergency, this plant could be reactivated for the production of BW in approximately one year. The pilot plants at Camp Detrick were used exclusively for research purposes although, in an emergency, they could be used for operational production of *Brucella suis* and *Pasteurella tularensis*.

The U.S. had no type-standardized weapons during this period, although the antipersonnel E48R2 bomblet was under development. Additionally, feather bombs for anticrop agent dispersal and antipersonnel Flettner rotors were studied.

1950-1953

Policy

In 1950, the Secretary of Defense's Ad Hoc Committee on CBR (Chemical-Biological-Radiological) Warfare conducted a broad-based review of the U.S. BW program and policy for employment. The Committee recommended the construction of a BW production facility, field testing of BW agents and munitions, and an expansion of all aspects of BW research efforts.

When the Korean War began in June 1950, the Secretary of Defense was in the process of reviewing the final report of the Ad Hoc Committee on CBR Warfare. With the onset of the Korean War, fears of enemy use of BW in the conflict prompted efforts in the U.S. to attain a BW retaliatory capability. On 27 October 1950, the Secretary of Defense formally approved, and directed the implementation of, the majority of the Ad Hoc Committee on CBR Warfare's recommendations. Accordingly, the U.S. biological warfare program experienced considerable expansion within the policy guidelines of "use in retaliation only."

On 21 December 1951, the Secretary of Defense issued a Department of Defense (DOD) Directive which addressed the lack of biological warfare readiness. The directive called for a continuation of the approved 27 October 1950 Ad Hoc Committee recommendations, and prescribed further reviews by the Research and Development Board in order to increase the emphasis on BW development programs.

In response to the 21 December 1951 DOD Directive concerning CBR readiness, the Secretary of the Army established a committee to evaluate Army efforts in chemical and biological warfare (CBW). As a result, the BW and CW programs were reorganized into separate elements, and the adoption of a vertical structure was implemented by the end of 1953.

Research and Development

The study of aerosols became central to the biological warfare program since infection by the respiratory route was the only effective way to generate mass casualties. Mathematical modeling was developed to complement aerobiology. The erection of test chambers at Camp

Detrick starting in the late 1940s made Detrick the home of the new discipline of aerobiology. These chambers, large and small, reduced dependence on the proving grounds, allowed more rapid progress in fundamental studies and eliminated the hazards associated with field testing. An aerobiology laboratory was completed at Camp Detrick in 1953. In 1952, the Central Intelligence Agency entered into an agreement with the U.S. Army on the biological weapons project codenamed MKNAOMI. Under this project, the Army's Special Operations Division at Fort Detrick, Maryland provided assistance and facilities to CIA's Technical Services Division for the development, testing, and maintenance of biological agents and delivery systems for potential use in small-scale covert operations.

Major research facilities to support an expanded BW research and development program were constructed at Camp Detrick, and in 1953, over \$10 million worth of laboratory and pilot plant facilities were completed.

Test and Evaluation

The BW test program was accelerated during this period. The first large area vulnerability test was conducted in San Francisco, California, in September 1950, using the simulants BG, SM, and fluorescent particles. The first open air sea tests with the biological simulants BG and SM were conducted aboard U.S. Navy ships in the Atlantic Ocean off Norfolk, Virginia. Simulant clouds were released to envelop ships to assess their vulnerability and to test prototype BW detection devices. Simulant testing continued during this period, involving both the public and non-public domains.

Small-scale pathogenic field testing at Dugway Proving Ground was resumed in 1950 and expanded in 1951. Agents tested included *Coxiella burnetii*, Psittacosis virus, *Pasteurella pestis*, *Brucella suis*, *Pasteurella tularensis*, *Clostridium botulinum*, and *Brucella melitensis*. Also tested during this time were the M114 bomb, the E61 bomb, various generators, and the feather bomb.

Anticrop testing also began during this period. Trials with cereal pathogens were conducted at Pine Camp, New York, in 1950.

Antianimal research was initially carried out at Camp Detrick, but when there was a need for larger scale research, a facility was established at Plum Island, Camp Terry, New York. Antianimal trials using hog cholera virus were conducted at Eglin Air Force Base in 1951. Tests with Newcastle disease of poultry were conducted in 1951 at Madison, Wisconsin. In 1954, the antianimal BW program was discontinued because it was considered to lack military worth, and Camp Terry was turned over to the U.S. Department of Agriculture.

Production, Stockpiling, and Weaponization

In 1950, the Army was authorized to construct a biological agent production facility at Pine Bluff Arsenal, Arkansas, to produce *Brucella suis* and *Pasteurella tularensis*. Construction started in February 1951. In December 1953, the plant entered the shakedown, test phase with pathogenic organisms, and became operational in the spring of 1954.

Production of the anticrop agents – stem rust of wheat and stem rust of rye – began in 1951 at military installations. Sites were carefully selected in coordination with, and with the approval of, the U.S. Department of Agriculture. The first limited anticrop BW capability was achieved in 1951 when the E77 feather bomb was developed and put in production for the Air Force. The wheat stem rust spores and rye stem rust spores were shipped to Edgewood Arsenal where they were categorized, dried, and placed in bulk storage (not in weapons).

1954-1958

Policy

Between 1954 and 1955, the Joint Chiefs of Staff (JCS) conducted an operational evaluation of biological warfare for the Secretary of Defense. The JCS concluded that significant developments were required before the U.S. could achieve an operational offensive BW capability, and that the program should continue to expand in hopes of attaining this capability.

The United States' policy concerning the use of biological warfare was realigned in 1956 based upon statements of Soviet doctrine expressed by the Soviet Defense Minister and Soviet Navy Commander-in-Chief. Soviet Defense Minister Marshal Zhukov, in a speech to the 20th Communist Party of the Soviet Union (CPSU) Congress on 20 February 1956, stated that future general wars would be characterized by the use of various means of mass destruction, including chemical and biological warfare. This statement of military doctrine was repeated three days later by Sergei Gorshkov, the Commander-in-Chief of the Soviet Navy.

Based upon the February 1956 statement of Soviet doctrine, the U.S. policy concerning chemical and biological warfare was reformulated to the effect that the U.S. would be prepared to use BW or CW in a general war to enhance military effectiveness. Under this policy, the decision to use BW or CW would be reserved for the President. In 1956, the U.S. policy of "use of biological warfare in retaliation only" was realigned to a policy of use at the discretion of the President for the enhancement of military effectiveness in a general war.

Further review of the BW program was conducted by the Defense Science Board, which held a BW/CW Symposium at the Rand Corporation in December 1958. This symposium considered the military and political impact of chemical and biological warfare, and resulted in recommendations that the Secretary of Defense acquaint the Joint Chiefs of Staff with the results of the Symposium, develop weapons requirements, increase the CB research effort, develop weapons systems employment doctrine, and attempt to gain public acceptance and support for the chemical and biological warfare programs.

Research and Development

The growth of BW research and development capabilities continued at Fort Detrick. Between August 1954 and July 1958, the following facilities were constructed: Safety Laboratory, Medical Science Laboratory, Virus and Rickettsia Laboratory, Plant Science Laboratory, Medical Bacteriological Laboratory, and a Special Operations Laboratory. Safety continued to be a major concern, particularly when the shipment of BW agent was contemplated.

Agent research in the late 1950s and continuing into the 1960s focused on improving agent stabilization and the ability of the selected microbes to maintain viability and virulence during storage, delivery, and after exposure to the environment. Stabilization was partially achieved through improvements in laboratory equipment and techniques; use of freeze-drying or lyophilization of liquid agents to improve viability; use of additives, coagents, and microencapsulation to mitigate the effects of lethal ultraviolet radiation and the tendency of some agents to agglomerate or denature during dissemination; and the development of new methods of generating aerosols. Improvements in mathematical modeling of aerosol decay and cloud transport parameters eliminated and/or controlled a great deal of variability and uncertainty of developing and deploying biological agents.

Research programs also included studies in the selection of strains for different characteristics; pathogenesis, improvement of growth media; adaptation of laboratory procedures for pilot plant production; safety measures and decontamination procedures for manufacturing operations; separation, concentration and drying of agents; packaging and storing; and the development of test methods and procedures for routine process control.

Test and Evaluation

Testing continued in the areas of vulnerability, simulant, and live agent studies. Pathogenic testing continued at Dugway Proving Ground using the following pathogens: *Coxiella burnetii*, *Brucella suis*, *Bacillus anthracis*, *Pasteurella tularensis*, and stem rust of wheat. Additionally, wheat stem rust was grown at several locations in the public domain with approval from the U.S. Department of Agriculture.

During the 1950s, the Scheele Committee convened to consult with the Department of the Army on the advisability and safety of testing prototype biological hardware containing animal and plant pathogens at Dugway Proving Ground. The Committee made specific recommendations regarding the agents tested and concerning the safety of conducting field trials.

In 1957, Operation Large Area Coverage (LAC) was begun by the Army and continued through 1958. The test area covered the United States from the Rockies to the Atlantic, and from Canada to the Gulf of Mexico. A myriad of microscopic particles was dropped from aircraft, and the distance and direction these particles traveled with the wind was determined. The objective of these tests was to determine: (1) if it would be feasible to contaminate a large area by this method using BW agents, and (2) if so, what logistics would be involved.

Simulant testing on public and non-public domains continued during this time frame. In addition, the practicality of employing the *Aedes aegypti* mosquito was evaluated in several tests conducted in the vicinity of Avon Park, Florida, from 1956 through 1958. In these tests, uninfected mosquitoes were released from aircraft and helicopters, and their dispersion was studied.

A major epidemiology study of wheat stem rust was conducted in the U.S. Virgin Islands from 1954 to 1957.

The testing program during this time period also included the use of human volunteers. Operation WHITECOAT was the code name for a plan to use volunteers in field experiments concerning the effects of biological pathogens upon humans. The Surgeon General established a special medical unit at Fort Detrick to operate a hospital facility and provide assistance on the medical aspects of the program.

Production, Stockpiling, and Weaponization

Large-scale production of *Brucella suis* began at Pine Bluff Arsenal in the spring of 1954 and large-scale production of *Pasteurella tularensis* began a year later. Production hardware for the antipersonnel BW cluster bombs began early in 1953 and by the end of the year had been delivered to Pine Bluff Arsenal. However, the agent was not stored in these weapons. The only time a weapon was filled was to meet testing requirements.

Military facilities remained the production sites for anticrop agents, and the processed agent continued to be stored at Edgewood Arsenal. In 1955, production of stem rust of rye was terminated since there was serious question about its military utility. Production of stem rust of wheat ended in 1957 for a variety of non-technical reasons.

1959-1962

Policy

In a mid-1959 briefing to the Secretary of Defense, the Director of Defense Research and Engineering (DDR&E) stated that the U.S. retaliatory capabilities were out of date, and that effective modernization required a comprehensive expansion of the research, development, testing and evaluation (RDT&E) efforts over a five-year period.

The Secretary of Defense then formed the Biological and Chemical Defense Planning Board, which was designated to set the priorities and objectives of CBR weapons systems. This board recommended that the RDT&E efforts in general be expanded in order to develop operational capabilities and to improve defensive systems, and that specific emphasis should be placed on the development of incapacitating biological agents. On 12 August 1960, the Office of the Secretary of Defense approved and directed the implementation of the planning board's recommendations.

In May 1961, the Secretary of Defense directed the Joint Chiefs of Staff to evaluate the potentialities of chemical and biological warfare, and to prepare a costed plan for the development of an adequate CBW deterrent capability. This project was Number 112 of approximately 150 projects under study by the Kennedy Administration.

On 31 May 1961, the JCS submitted its findings to the Director of Defense Research and Engineering for review and comment. The DDR&E agreed generally with the Joint Chiefs of Staff's findings, and suggested that Project 112 be divided into a three-phase plan, with a short-term, intermediate, and a five-year plan. In July 1961, the Secretary of Defense accepted the JCS recommendations as modified by the DDR&E, and a DOD task group was formed which prepared a comprehensive plan for executing Project 112.

Given the potential rise of small-scale conflicts, or "limited wars," and the need for a weapon which could assist in controlling such conflicts with minimal casualties, BW RDT&E efforts shifted to emphasize incapacitation. In the early 1960s, the implementation of Project 112 led to a comprehensive expansion of the U.S. BW program, as the U.S. sought to obtain adequate operational capabilities within the framework of the ongoing BW policy of preparedness for use at the discretion of the President.

Research and Development

By the end of 1959, the scope of the Chemical Corps BW mission reached a height of emphasis unprecedented since WWII. The military branches were submitting requirements for BW munitions, including dissemination means for missiles, artillery, drones, and other lesser weapons systems. Additionally, the Director of Defense Research and Engineering revived the Army's anticrop program in 1959. The comprehensive increase in research and development efforts stemmed from the approved recommendations of the Secretary of Defense's Biological and Chemical Defense Planning Board.

In 1960, while the overall BW research and development efforts were expanding in order to attain desired operational capabilities, the emphasis of the R&D and program shifted from lethal applications to controlled temporary incapacitation.

As a component of the Project 112 requirements, the BW research and development efforts were considerably accelerated in 1962. The development of vaccines for *Pasteurella tularensis* (tularemia) and *Coxiella burnetii* enabled development efforts on *Coxiella burnetii* and tularemia to proceed to standardization as BW agents.

Test and Evaluation

Simulant testing on public and non-public domains continued, as did pathogenic testing at Dugway Proving Ground. Pathogens tested included: *Pasteurella tularensis*, *Bacillus anthracis*, *Coxiella burnetii*, *Clostridium botulinum* and *Coccidioides immitis*. Utilizing existing agent stockpiles which had become non-viable, wheat stem rust and rice blast were tested in the public domain and on government installations during this time frame with U.S. Department of Agriculture approval.

In response to a Project 112 requirement for a Joint Task Force to undertake extra-continental testing of chemical and biological agents, the Army activated a BW/CW test-coordinating organization in May 1962 called Deseret Test Center (DTC) and located at Fort Douglas, Salt Lake City, Utah. DTC did not actually conduct tests; rather, Deseret served as the headquarters for the planning of BW test operations. Specifically, DTC was to coordinate requirements for, plan, and evaluate testing of biological weapons and defensive systems; the actual testing was conducted by staff at Dugway Proving Ground with assistance from the services. DTC was staffed by all the military services, and maintained liaison with the U.S. Public Health Service. While reporting to the Army's Chief Chemical Officer and the Army Chief of Staff, DTC had to obtain approval of the JCS for the conduct of tests, to include materiel, personnel, and funds. In 1962, the Davis Committee was established to advise the Secretary of the Army and the DTC commanding general regarding the ecology, epidemiology, and safety of conducting field trials with pathogenic microorganisms at remote, extra-continental test sites.

Production, Stockpiling, and Weaponization

Production of *Brucella suis* and *Pasteurella tularensis* continued at Pine Bluff Arsenal. In addition, production of *Clostridium botulinum* began. As before, the agent was not weaponized and any agent that was stockpiled was bulk stored.

In 1959, processed stem rust of wheat and stem rust of rye which had been stored at Edgewood Arsenal were disposed of by burial, or the non-viable spores used as simulant. In effect, the U.S. anticrop capability ceased to exist. However, as a result of tests in the early 1960s and the reinvigoration of the U.S. offensive BW program caused by Project 112, wheat stem rust production was reinstituted on military installations in 1962.

1963-1968

Policy

During the Vietnam War, the scope and effort of the biological warfare program were limited. The U.S. BW program was essentially guided by elements of Project 112, and substantial progress was initially made towards achieving adequate biological warfare capabilities. However, the escalating financial drain of the conventional commitment in Vietnam, and the emphasis on the development of chemical herbicides for Vietnam, restricted the activities and the budget of the U.S. BW program. Between 1963 and 1968, the U.S. policy concerning the employment of biological warfare remained a policy of use at the discretion of the President.

Research and Development

Research and development of anticrop agent cultivating methods continued during the 1963 and 1968 time frame. The cultivating methods were originally developed at Fort Detrick, and were subsequently refined under contract between 1963 and 1966.

Agent research and development continued to focus on incapacitating applications, and significant progress was made with *Staphylococcus enterotoxin B* (SEB). By 1964, research on SEB had progressed to the point where production and weaponization appeared feasible, and accordingly RDT&E efforts on SEB were accelerated.

Personnel at Fort Detrick made a major research advance when they developed stabilizing additives which significantly reduced biological decay rates for liquid agents in low humidity environments, and accordingly increased the agent's downwind travel distance.

Test and Evaluation

Simulant testing on public and non-public domains continued during this time period as did pathogenic testing at Dugway Proving Ground. Pathogens tested included: *Pasteurella tularensis*, *Coxiella burnetii*, and *Coccidioides immitis*. Wheat stem rust and rice blast continued to be tested

in the public domain and on government installations with U.S. Department of Agriculture approval.

Several tests outside the continental United States were conducted under DTC aegis. Night Train tested VB45Y-1 liquid spray tanks using the simulant *Bacillus globigii* in an Arctic environment. It also tested sampler efficiency, agent decay rate in a high vegetation (densely wooded area) and downwind coverage from the spray tank.

Shady Grove was a series of 13 aerosol trials with liquid agents *Coxiella burnetii* and *Pasteurella tularensis*. These trials were conducted in the Marshall Islands to determine biological decay (viability) and infectivity of these agents when disseminated over a relatively long period in a temperate marine environment. These tests supported stated Military Services' requirements.

Test 68-50 was a full-scale field test of the area coverage potential of the F4A/B45Y-4 dry SEB weapon system. DTC conducted the test at Eniwetok Atoll, Marshall Islands, during September and October 1968. This test was conducted to determine the effectiveness of agent dissemination and the viability of SEB as an agent.

Production, Stockpiling, and Weaponization

Production of *Brucella suis*, *Pasteurella tularensis*, and *Clostridium botulinum* continued during this time period. After modifications and upgrades to the facility at Pine Bluff Arsenal, production of *Coxiella burnetii*, Venezuelan Equine Encephalomyelitis, *Bacillus anthracis* and Staphylococcal enterotoxin began. The majority of the agent was bulk stored, although some agent was weaponized in the M1, M2, M4, and M32 systems. In addition, an entomological facility was constructed to breed *Aedes aegypti* mosquitoes. These mosquitoes were not infected with agent and the facility was deactivated in 1966 after demonstrating large-scale breeding techniques.

Production of wheat stem rust continued at six military installations. The agent was shipped to Rocky Mountain Arsenal where it was processed and bulk stored. In 1969, after the Army learned of the impending termination of the offensive BW program, all agent movements were terminated. Consequently, the recently harvested wheat stem rust at Beale Air Force Base was not shipped to Rocky Mountain Arsenal, but rather temporarily stored, pending its demilitarization at Beale.

Pilot production of rice blast was undertaken by a commercial firm using the submerged culture process. Production was terminated in 1966 after the concept proved feasible. The limited quantity of rice blast produced was bulk stored at Fort Detrick.

1969-1972

Program Termination

In May 1969, President Nixon directed the National Security Council (NSC) to conduct a review of the U.S. chemical and biological programs, policies, and operational concepts. The NSC formed an Interdepartmental Political-Military Group, including representatives from governmental and non-governmental agencies, and conducted a comprehensive six-month study on CBW. Upon reviewing the National Security Council's recommendations, President Nixon announced several major changes in U.S. CBW policy on 25 November 1969. With regards to the BW program, President Nixon renounced the use lethal bacteriological (biological) agents and weapons and all other methods of biological warfare, and he directed the Defense Department to make recommendations for the disposal of existing BW weapons. He further stated that the U.S. would confine its biological research to defensive measures such as immunization and safety measures.

Although President Nixon's statement clearly renounced an offensive biological warfare program, questions remained as to whether or not the policy statements concerning chemical and biological warfare applied to toxins. Given that toxins could be derived from either biological processes or chemical synthesis, the question of classifying toxins as either BW or CW was an unresolved issue. In response to questions regarding where toxins fit within the new CBW policy, President Nixon directed an NSC study on the U.S. policy and program concerning toxins. Following this NSC Interdepartmental Political-Military Group review, President Nixon decided on 14 February 1970 to extend the announced ban on offensive BW to include toxins regardless of their means of production.

Demilitarization

The offensive BW program (R&D, testing, production, and storage) was terminated by President Nixon's announcement in November 1969. However, in anticipation of the President's announcement, the Department of the Army in August 1969 was directed to immediately cease all production of toxins and biological agents and filling of dissemination devices. After the President's announcement, guidelines for BW demilitarization plans were formulated and plans were initiated for disposal of all antipersonnel agents and munitions at Pine Bluff Arsenal. The plans emphasized operational safety and control, total accountability for all materiel, and absolute verification of destruction in the form of incontrovertible data. The plans were reviewed extensively by Army experts and by U.S. Departments of Health, Education and Welfare; Interior, Agriculture; and the Environmental Protection Agency; and appropriate state and local officials. Accompanying environmental impact statements were filed with the President's Council on Environmental Quality.

Total destruction of DOD antipersonnel BW stocks and munitions was accomplished between 10 May 1971 and 1 May 1972. They were destroyed by pasteurization at 160 degrees for one hour and then further sterilized at 280 degrees for three hours. The facilities at Pine Bluff Arsenal were completely decontaminated and turned over to the Food and Drug Administration to become the National Center for Toxicological Research in May of 1972. Total destruction of DOD anticrop agents and decontamination of facilities at the three storage points (Rocky Mountain Arsenal, Beale Air Force Base, and Fort Detrick) was accomplished by treatment twice with Freoxide, incineration, and plowing into soil between 19 April 1971 and 15 February 1973.

The offensive biological warfare RDT&E program was also terminated in 1969 with a complete inventory of all BW materiel at Fort Detrick and Dugway Proving Ground and destruction of all items except those essential to defensive biological research. The BW production facilities were decontaminated and assigned to the Army Health Services Command pending formal transfer to the National Cancer Institute (NCI).

In November 1995, a construction crew digging a sewer line at Wright-Patterson Air Force Base, Ohio, discovered M-114 submunitions and the end plates from three M33 cluster bombs. Liquid samples from 13 of the 92 unearthed bomblets were sent to USAMRIID, where the liquid was analysed and determined to be nonviable *Brucella suis*. The unearthed bomblets and the liquid samples were destroyed in January 1996. A small amount (approximately 50 ml) of each sample was retained at USAMRIID for use as a reference pursuant to further remediation efforts at Wright-Patterson AFB to recover and destroy the remaining bomblets. The reference samples were to be destroyed within 60 days following completion of remediation operations.

A thorough and careful analysis during the Spring of 1996, including the examination of historical documents clearly verified that the M-114 bomblets and their M33 delivery systems found buried at Wright-Patterson contained no explosives or viable biological agents.

The M-114 bomblets and their M33 delivery system were utilized in a series of tests conducted at Wright-Patterson in 1954 as part of a classified program, Operation White Floor. After research and development experiments were completed, the Brucella bacteria in the M-114 bomblets were sterilized by subjecting them to several long duration heat treatments. The M-114 bomblets were then disposed of by deep ground burial, the accepted practice of the 1950s time period. The testing and disposal took place in 1954.

The recovery operations were completed on September 13, 1996. A total of 2306 M-114 bomblets were recovered. This number is consistent with the number of M-114 bomblets that were used in Operation White Floor and subsequently disposed of in 1954.

U.S. Defensive BW Program (1941-1995)

1941-1945

At the beginning of World War II, after careful study, a National Academy of Sciences Biological Warfare (BW) committee concluded in February 1942 that biological warfare was feasible and urged that appropriate steps be taken to reduce U.S. vulnerability to BW attack. Subsequently, the War Research Service (WRS) was formed, with its first task being the development of defensive measures against possible BW attack.

Concern about possible use of BW by the German Wehrmacht against allied forces in the European theater further propelled the U.S. BW defense program. This concern was operationalized by a 13 January 1944 memorandum from Secretary of War Henry L. Stimson to the Army Chief of Staff along with subsequent endorsements which directed the Surgeon General to collaborate with the Chief of the Chemical Warfare Service (CWS) in defense against BW.

This was subsequently followed by a request, dated 17 January 1944, from the Chief of the CWS, where the Surgeon General agreed to be responsible for the procurement, storage, and issue of biological products designed to protect troops against various BW agents which might have been employed by the enemy. This included the program of Botulinum toxin (X) toxoid procurement, storage, and issue — all being undertaken by the Surgeon General's office.

Early detection of BW attack and speedy identification of the agents employed were considered of utmost importance by the United States during World War II. Methods of detection included: suspicious circumstances, e.g., use of unusual types of weapons and offensive techniques, appearance of specialized troops in strategic areas, unusual types and amounts of special equipment, unusual types of inoculation of enemy personnel, unusual types of enemy medical stores, transportation or storage of highly classified materiel, issue of protective equipment, enemy instruction of line troops in BW protection, unusual taste in food, etc.; manifestations of a successful BW attack, e.g., appearance of disease in an uninfected area, occurrence of numerous, unexplained, and unusual diseases, simultaneous appearance of many cases of disease, unusual symptomology, simultaneous appearance of two or more infectious diseases in the same individual, unusual sickness or death in the animal population, etc.

During this period it was considered necessary to have germicidal agent available in large quantities for decontamination. Other methods of decontamination included sterilization and burning. Calcium hypochlorite (bleach) solution was the preferred decontaminating agent planned for use by the military in the field. Clothing, equipment, structures, airspace, and personnel were either sprayed, washed, or submerged in a 7-20 percent solution for as long as 15 minutes.

During World War II, there were effectively two ways of protecting an individual soldier from the BW agents, i.e., physical and medical barriers to infection. Methods for physical protection were based upon modifications of procedures for defense against chemical weapons. Impermeable clothing, along with protective hoods and the M5-11-7 gas mask with E-4 biological filter, provided complete protection against exposure to BW. CC2 aqueous impregnated clothing also provided some limited protection against BW agents. All methods of CW protection were examined, but respiratory protection was the only protective method deemed necessary for defense against BW agents. Later, in 1945, the M9A1 mask became the standard form of BW/CW respiratory protection for the military services.

Among the milestones in biological prophylaxis reached during World War II were the development of new influenza vaccines and effective toxoids against Botulinum toxin Types A and B. In the beginning of 1944, the United States felt confident in only one medical prophylactic, known as Botulinum toxoid. No means of medical protection were known against other BW

agents. In January 1944, it was estimated by the CWS and the Canadian Bacteriological Warfare group that enough material was available to administer Botulinum toxoid to 25,000 men. In the event of great need, commercial firms would be relied upon to fulfill demands. On 12 January 1944, approval was given by the War Department for the production of Botulinum toxoid for shipment to and storage in England for the purpose of vaccinating American soldiers fighting in World War II; however, the decision to administer these drugs was reserved.

Later, in 1944, the program of Botulinum toxoid procurement and issue was undertaken by the Surgeon General's Office. Botulinum toxoid A was first delivered in bulk to a commercial firm for filling on 11 April 1944. From 21 May to 31 August 1944, five shipments of Botulinum toxoid were shipped overseas. Meanwhile, work on Botulinum toxoid B had progressed. By 31 August 1944, the quantity overseas was sufficient for 1.25 million men. A contract made with another firm to produce a similar product of Types A and B, amounting to enough for two million men, was about half completed as of November 1944.

Another important area of BW defense was the protection of livestock from antianimal BW agents. Advances in protection of livestock and domestic fowl included the mass production of vaccines for rinderpest and Newcastle diseases.

In June 1944, at the direction of the Secretary of War, the CWS was made responsible for all work on BW defense, among other BW-related tasks. This was followed in August and September 1944 by further definition and refinement of the role of the Surgeon General's Office in BW defense. The basic communication, dated 5 August 1944, requested that the Surgeon General's cooperation in defense include supervision of all research in biological warfare installations on the immunology and therapeutics of disorders due to BW agents.

At the same time that the Surgeon General's role in BW defense was being expanded, the Army took a more detailed look at methods for defending and protecting ground troops from a BW assault. This resulted in the publication of the field manual, *Instruction for Defense Against Biological Attack*, which was released on 10 January 1945 by the CWS. As the first document aimed at training military personnel for BW defense, this field manual was designed to inform military personnel of the nature of biological warfare, and measures which could be taken to defend against it in the field.

Tactics of defense against BW attack were essentially general in nature. Commanders were to report all suspected or actual BW attacks to higher authorities. Individuals were instructed to don protective clothing and equipment. Full advantage was to be taken of dugouts, permanent and temporary shelters, and vehicles during attacks. Known contaminated areas were to be avoided as much as possible. If defense of these areas was required, they were to be held as lightly as possible by troops who were properly protected. Counterattacks were to be directed against installations and weapons used in the BW attack.

At the end of World War II, the activities of the Office of the Surgeon General consisted of: liaison activities with civilian and special Army committees on BW; participation in BW protection programs in Hawaii; testing of POW sera for specific antibodies; assistance to the defensive aspects of the CWS BW program; responsibility for biologicals needed for BW defense; responsibility for supervision of research in immunology and therapeutics; special application of the normal functions of the Surgeon General's Office; and administrative arrangements for carrying out the above activities.

1946-1949

After World War II, in response to concerns about the vulnerability of the United States to covert attack, the Research and Development Board of the Office of the Secretary of Defense

requested its Panel on BW to consider the implications of BW sabotage. The Committee provided a blueprint on goals, objectives, organization, and examples of projects. After 1949, vulnerability tests and studies were conducted.

1950-1953

During the Korean War period, it was recommended that the United Nations Forces in the Republic of Korea should maintain BW defensive preparedness due to fear of enemy use of BW. The first defensive open air vulnerability tests at sea with biological simulants were conducted in 1950 aboard U.S. naval ships in the Atlantic Ocean off Norfolk, Virginia. Simulant clouds were released to envelop ships so as to assess their vulnerability to BW agents and to test prototype BW electronic detection devices. In September 1950, the first large area vulnerability test was conducted in San Francisco Bay using simulants.

New advances in the area of BW decontamination were made when, in 1951, the Chemical Corps developed a method for the use of ethylene oxide, a gaseous disinfectant, for the decontamination of large objects like the standard Army 2 1/2-ton truck. Formaldehyde vapor was used in field tests for the decontamination of large enclosed spaces, and steam was found useful for decontaminating naval vessels. Rapid warning devices to indicate unusual increases of bacteria, protein, or micron-sized particles in the atmosphere were under development and evaluation.

Personnel protection, an important area in the BW defensive program, took another small step forward with the introduction of new gas masks in the early 1950s. After the end of World War II, the Chemical Corps Type Standardized a new type of mask, known as the M9 series. In 1951, the U.S. Army adopted the Model M9A1 mask, a canisterless type with filter pads inserted in the cheeks of the facepiece instead of using a bulky canister.

BW defensive doctrine advanced with the publication, in March 1952, of *Special Text No. 3-153A: Defense Against Biological Attack*, produced by the Chemical Corps School. The manual supplemented *Training Circular 12: Defense Against Biological Warfare*, which was released in 1950.

In 1952, there was a noted increase in defensive work as exemplified by the research program in protection against BW being almost doubled. Much data were developed in personnel protection, decontamination, and immunization. Early detection research was started, but progress was slow due to the complexity of developing a device capable of providing sufficient warning of release of a variety of BW agents.

Vulnerability tests again came to the fore when, in 1953, the Special Operations Division at Fort Detrick concluded a series of tests on the vulnerability of American drinking water supplies to BW attack. Their conclusions were that standard water treatment, consisting of pre-sedimentation, coagulation and sedimentation, sand filtration, and chlorination, in that sequence, was "reasonably effective in removing or inactivating BW agents added to raw water."

With respect to defensive antianimal BW research, from October 1951 to July 1954, a major field study was carried out on rinderpest and African swine fever. This research project, a cooperative effort with the U.S. Department of Agriculture, resulted in the development of a tissue culture process for producing rinderpest vaccine.

1954-1958

The post Korean War period was a time of identifying lessons learned from the Korean War. This resulted in a host of new defensive developments. One area, the defense of livestock

from BW attack, was still a consideration. On 30 September 1953, the offensive antianimal BW research program was canceled. Despite this, defensive antianimal research continued. At the conclusion of the offensive portion of the antianimal program, the Secretary of Defense and the Secretary of Agriculture established an agreement where the Department of Agriculture assumed responsibility for defense of livestock against BW attack. As a consequence, the Plum Island (Fort Terry), New York, facilities were transferred to the Department of Agriculture. Defensive antianimal research projects in Kenya, British East Africa, and Plum Island were continued under the auspices of Camp Detrick until 30 June 1954 to permit the Department of Agriculture to budget for and continue this work.

The vulnerability of personnel to BW agents continued to be of chief concern to the U.S. Army. In 1954, the Chemical Corps established Project CD-22, to study the susceptibility of man to aerosols of an infectious BW agent. In 1955 and 1956, volunteers were exposed to aerosols of *Coxiella burnetii*, the cause of Q fever, disseminated from a prototype munition in the test sphere at Fort Detrick, and on the test grid at Dugway Proving Ground.

Civil defense authorities were likewise concerned about the BW threat, especially the vulnerability of the U.S. water supply to covert and overt BW attack. In 1955, standard water treatment methods, like chlorination, were recognized as insufficient but a necessary first defense to purify the civil water supply contaminated with BW agents.

A major success in the BW defensive program occurred in 1955 when Dr. George Wright developed a safe and effective human vaccine against *Bacillus anthracis*. This development was of great importance due to the major antipersonnel potential of the *Bacillus anthracis* BW agent.

1959-1962

During the limited war period, the U.S. BW civil defense program took a major stride forward when, in October 1959, Annex 24 of *The National Plan for Civil Defense and Defense Mobilization*, which was titled *National Biological and Chemical Warfare Defense Plan*, was released by the Office of Civil and Defense Mobilization. The plan outlined the general responsibilities of the U.S. government in defense against BW agents; the functions required for BW defense, including detection, warning, and identification; and the execution of the BW defense plan.

In the early 1960s, the U.S. offensive and defensive BW programs underwent tremendous change as codified in Project 112. This had important implications for the defensive program, as well, when the Task Group Report on Project 112 placed six requirements on the Joint Chiefs of Staff (JCS). The third requirement called for the performance of practical operational tests with combat units in order to evaluate the then-current posture of the U.S. military in BW and CW defense and to ensure that the best possible use was made of then-existing defensive equipment, protective measures, and training.

Also in the early 1960s, the protection of personnel from BW attack made another advance when the M17 mask was developed and standardized. It provided greater vision, allowed greater speech transmission, was more comfortable, and posed less resistance to breathing. During the same period, the M22 civilian protective mask was developed. It was less rugged and costly; however, it provided a very effective protective capability. An infant protector was also designed to create a filter protected area for children under the age of three. In addition, treatment of BW casualties advanced when, in 1962, \$2.3 million was authorized for procurement of broad spectrum antibiotics for BW casualties.

1963-1968

Defensive BW developments in this period emphasized rapid detection systems, extension of available vaccines, and improved therapy and prophylaxis. Vulnerability testing was of particular concern as exemplified by the numerous tests carried out during this time. For example, in 1964 a surface ship vulnerability test using the simulant *Bacillus globigii* – dubbed Autumn Gold – was conducted near Hawaii using four naval vessels. The objective of the test was to evaluate ship vulnerability to BW penetration. In 1965, Copperhead was initiated to fulfill a Navy requirement to evaluate surface ship vulnerability, as part of Autumn Gold, as well as to evaluate ship penetration by BW agents in cold weather. The test was conducted off the coast of Newfoundland, using the BW simulant *Bacillus globigii*, and it consisted of nine trials.

In addition, in June 1966, a series of vulnerability trials were conducted in three north-south subway lines in mid-Manhattan, New York City. The simulant *Bacillus globigii* was disseminated within the subway tubes and from the street into the subway stations.

1969-1972

With the end of the offensive BW program came an increased focus on defensive developments. A precursor to this was new doctrinal developments as embodied in TM 3-216: Technical Aspects of Biological Defense, which was released in January 1971 for use by both the Army and the Air Force (as AFM 355-6). The manual delineated the responsibilities for an effective BW defense among the Army Combat Developments Command, the Army Materiel Command (AMC), and the Surgeon General. The unit commander was responsible for the application of correct biological defensive measures and maintenance of unit protective equipment.

Methods of BW defense included active defense measures, which consisted of destroying the enemy's BW facilities and intercepting the enemy's weapons systems. Passive defense measures consisted of personal hygiene and area sanitation as well as immunization before the attack, use of a protective mask and protective clothing during the attack and, after the attack, therapy consisting of chemoprophylaxis, passive immunization, and/or chemotherapy. TM 3-216 also identified four phases of detection, which were: 1) Rapid warning, 2) Sampling, 3) Identification, and 4) Epidemiology.

The defensive program continued its examination of personnel vulnerability when a literature search was conducted in 1971 to find candidate nonpathogenic bacteria for use as simulants in BW defensive studies where the most important criterion for candidate simulant organisms was complete non-pathogenicity.

1973-1977

Since the President's ban on offensive biological efforts in November 1969, the Army had confined its biological technical program to defensive development involving protection and medical procedures. On 1 April 1972, Fort Detrick was transferred from the Army Materiel Command to the Office of the Surgeon General.

The overall biological defense program during this period included basic research and development of biological detection and alarm devices; development of high volume aerosol sampling and collection equipment; as well as development and evaluation of devices, systems, methods, and protocols for physical protection and decontamination. The major thrust of the physical defensive program during the 1972 and 1976 time frame was towards end item development of a Biological Detection and Warning System for the Field Army.

Exploratory development of biological agent decontamination continued throughout the 1972-77 period. A contract package was prepared for the exploratory development of a decontamination system for biological contaminated personnel, equipment, and enclosures. This was to be a four-year technical effort planned for FY77 through FY80.

The objective of the medical research program was the development of an effective, integrated, medical defense against biological weapons and highly infectious agents. New and classical techniques in virology, immunology, and pathology were employed to develop methods for the early diagnosis, prevention, and/or treatment of biological agent casualties, and rapid laboratory identification of biological agents as well as other extremely infectious diseases of importance in military operations. A major effort of research was the development, production, and stockpiling of vaccines – against known and potential biological agents – that could be used by US military troops when deployed.

1977-1996

Since 1977, two factors have served to continue to focus interest in research on defense against biological agents. One factor was evidence, supplied by the intelligence community, that other nations continued to maintain an offensive BW capability. Other literature sources indicated that a real threat existed, and suggested the prudence of maintaining a level of preparedness against potential BW agents.

The second factor which contributed to increased interest in biological defense was the realization that new methods in molecular biology and genetic engineering potentially could be applied to the creation of novel biological agents, or to the production of specific agents (such as protein toxins) in quantities that far exceed their natural levels of biological availability. Thus, in the early 1980's, the Department of Defense (DOD) reevaluated its biological defense efforts in light of the available evidence of a BW threat and the potential for the existence of novel biological warfare agents. In 1984, the Army formally established its Biological Defense Research Program (BDRP) to encompass all efforts underway in biological defense. All the work conducted under the BDRP program has been unclassified except where information impinges on national security. Emphasis was placed on improving the defense posture in the areas of biological agent detection, treatment, protection, and decontamination.

The goal of the BDRP remains to provide methods of detection for, and protective measures against, agents of biological origin that could be used as weapons against U.S. forces by hostile states or individuals. The specific program objectives that support this goal are:

- Development of biological agent detection methods.
- Development of treatment and protection capability. Included in this objective are efforts to ensure that protective masks, clothing, and shelters – which are developed primarily for protection against chemical threats – also provide protection against biological threats.
- Development of decontamination capability.

The DOD identified the Department of the Army as the Executive Agent for its research and development program on defense against chemical and biological warfare (DOD Directive 5160.5, 1 May 1975). The Department of the Army executed formal coordination with other armed services through the Joint Service Agreement, a Memorandum of Agreement with the Air Force, and the Joint Technology Coordinating Group of the Armed Services Biomedical Research, Evaluation and Management Committee. The program was conducted by the U.S. Army Medical Research and Development Command, a Field Operating Agency of the Office of the Surgeon

General; the Chemical Research, Development and Engineering Center (CRDEC); and Dugway Proving Grounds.

The annual DOD budget presentation to Congress specifically identifies the funds appropriated for the BDRP under Program 6, Research, Development, Test and Evaluation. In addition, a report on the Biological Defense Research Program is submitted annually to Congress in accordance with PL 91-121, as amended by PL 91-441.

In October 1992, the Army took a major step toward consolidating what would have otherwise become a fragmented chemical and biological defense effort, due to major restructuring of AMC, by establishing the Chemical and Biological Defense Agency (CBDA), which was officially activated on 1 January 1993. CBDA, which consists of 1,600 personnel, brings together the efforts of the Edgewood Research, Development, and Engineering Center (formerly CRDEC); Readiness and Sustainment Center; a Technical Escort Unit; Program Manager, Rocky Mountain Arsenal; Product Manager, Smoke/Obscurants; Program Manager, NBC Defense; Program Director for Biological Defense; and the Executive Agent for Chemical Treaty Compliance. The CBDA charter also includes executive management responsibility for joint Service chemical and biological research, development, and acquisition activities.

In June 1993, the Joint Program Office for Biological Defense (JPO-BD) was established to respond to critical biological defense deficiencies identified during Operation Desert Storm (ODS). The JPO was formally chartered on May 17, 1994. The Joint Program Manager serves as the principal advocate and single point-of-contact for all biological detection and vaccine acquisition efforts for DoD. The JPO-BD monitors biological technology data base activities to promote and facilitate the transfer and acceleration of emerging technologies to user applications across the services.

In June 1993, the Army approved an operational requirement for the Biological Integrated Detection System (BIDS). By November 1994, seven BIDS were completed and tested. In January 1995, the Army approved an operational requirement for the Long-Range Standoff Detection System (LR-BSDS). Early testing at Dugway Proving Ground, Utah, was successfully completed by December 1994.

ANNEX VII

CONFIDENCE BUILDING MEASURE C

Declaration of Vaccine Production Facilities

United States of America

April 1997

Form GDeclaration of Vaccine Production Facilities

1. Name of Facility:

The Salk Institute
Government Services Division
P.O. Box 250
Swiftwater, PA 18370

2. Location (mailing address):

Government Services Division
P.O. Box 250
Swiftwater, PA 18370

3. General Description of the types of diseases covered:

Baculovirus/Anthrax Protective Antigen
Botulinum toxin
Botulinum Toxoids A & B
Western Equine Encephalitis Virus
Eastern Equine Encephalitis Virus
Vaccinia Virus
Francisella tularensis
Coxiella burnetii antigens
Ricin

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Wyeth Laboratories, Inc.

2. Location (mailing address):

Wasp and Biddle Streets
Marietta, PA 17547

3. General Description of the types of diseases covered:

Adenovirus Vaccine Live, Oral, Type 4
Adenovirus Vaccine Live, Oral, Type 7
Cholera Vaccine
Diphtheria & Tetanus Toxoids & Pertussis Vaccine Adsorbed
Diphtheria & Tetanus Toxoids Adsorbed
Influenza Virus Vaccine
Smallpox Vaccine
Tetanus Toxoid
Tetanus Toxoid Adsorbed
Tetanus & Diphtheria Toxoids Adsorbed for Adult Use
Typhoid Vaccine

Form G**Declaration of Vaccine Production Facilities****1. Name of Facility:**

Lederle Laboratories Division
American Cyanamid Company

2. Location (mailing address):

401 N. Middletown Road
Pearl River, NY 10965

3. General Description of the types of diseases covered:

Diphtheria & Tetanus Toxoids & Acellular Pertussis Vaccine Adsorbed
Diphtheria & Tetanus Toxoids & Pertussis Vaccine Adsorbed
Diphtheria & Tetanus Toxoids & Pertussis Vaccines Adsorbed & Haemophilus
b Conjugate Vaccine (Diphtheria CRM₁₉₇ Protein Conjugate)
Diphtheria & Tetanus Toxoids Adsorbed
Haemophilus b Conjugate Vaccine (Diphtheria CRM₁₉₇ Protein Conjugate)
Influenza Virus Vaccine
Pneumococcal Vaccine, Polyvalent
Poliovirus Vaccine Live Oral Trivalent
Poliovirus Vaccine Live Oral Type I
Poliovirus Vaccine Live Oral Type II
Poliovirus Vaccine Live Oral Type III
Tetanus and Diphtheria Toxoids Adsorbed for Adult Use
Tetanus Toxoid Adsorbed

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Greer Laboratories, Inc.

2. Location (Mailing Address):

639 Nuway Circle, NE
P.O. Box 800
Lenoir, NC 28645-0800

3. General Description of the types of Disease Covered:

Plague Vaccine

Form GDeclaration of Vaccine Production Facilities

1. Name of Facility:

Connaught Laboratories, Inc.

2. Location (mailing address):

Route 611
P.O. Box 187
Swiftwater, PA 18370

3. General Description of the types of diseases covered:

Tetanus Toxoid
Tetanus Toxoid Adsorbed
Influenza Virus Vaccine
Yellow Fever Vaccine
Pertussis Vaccine
Meningococcal Polysaccharide Vaccine, Group C
Meningococcal Polysaccharide Vaccine, Group A
Meningococcal Polysaccharide Vaccine, Group A & C Combined
Meningococcal Polysaccharide Vaccine, Group A, C, Y, W135 Combined
Haemophilus b Polysaccharide Vaccine
Haemophilus b Conjugate Vaccine (Diphtheria Toxoid-Conjugate)
Diphtheria & Tetanus Toxoids Adsorbed
Diphtheria & Tetanus Toxoids & Pertussis Vaccine Adsorbed
Tetanus & Diphtheria Toxoids Adsorbed for Adult Use
Diphtheria & Tetanus Toxoids & Acellular Pertussis Vaccine Adsorbed

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Massachusetts Public Health Biologic Laboratories

2. Location (mailing address):

305 South Street
Boston, MA 02130

3. General Description of the types of diseases covered:

Diphtheria & Tetanus Toxoids & Pertussis Vaccine Adsorbed
Diphtheria & Tetanus Toxoids

Form GDeclaration of Vaccine Production Facilities

1. Name of Facility:

Parke-Davis, Division of Warner Lambert Company

2. Location (mailing address):

2800 Plymouth Road
Ann Arbor, MI 48103

3. General Description of the types of diseases covered:

Influenza Virus Vaccine

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Michigan Biologic Products Institute

2. Location (mailing address):

3500 North Martin Luther King, Jr., Blv'd.
P.O. Box 30035
Lansing, Michigan 48909

3. General Description of the types of diseases covered:

Anthrax Vaccine Adsorbed
Diphtheria & Tetanus Toxoids & Pertussis Vaccine Adsorbed
Diphtheria & Tetanus Toxoids Adsorbed
Diphtheria Toxoid Adsorbed
Pertussis Vaccine Adsorbed
Rabies Vaccine Adsorbed

Form GDeclaration of Vaccine Production Facilities

1. Name of Facility:

Bayer Corporation

2. Location (mailing address):

800 Dwight Way
P.O. Box 1986
Berkley, CA 94701

3. General Description of the types of diseases covered:

Polyvalent Bacterial Vaccines with "No U.S. Standard of Potency"

Form G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Organon Teknika Corporation

2. Location (Mailing Address):

100 Akzo Avenue
Durham, NC 27712

3. General Description of the types of diseases covered:

BCG Vaccine

FORM G

Declaration of Vaccine Production Facilities

1. Name of Facility:

Merck & Co.

2. Location (mailing address)

Sumneytown Pike
West Point, PA 19486

3. General description of the types of diseases covered:

Haemophilus b Conjugate Vaccine (Meningococcal Protein
Conjugate) & Hepatitis B (Recombinant) Vaccine
Haemophilus b Conjugate Vaccine (Meningococcal Protein Conjugate)
Hepatitis B Vaccine (Recombinant)
Measles Virus Vaccine Live
Measles and Mumps Virus Vaccine Live
Measles and Rubella Virus Vaccine Live
Measles, Mumps and Rubella Virus Vaccine Live
Mumps Virus Vaccine Live
Pneumococcal Vaccine, Polyvalent
Rubella Virus Vaccine Live
Rubella and Mumps Virus Vaccine Live
Varicella Virus Vaccine live
Hepatitis A Vaccine Inactivated